MMiR

MILITARY MINIATURES in REVIEW

no. 55

Be my Valentine?
The Mini-Art Valentine

Amphibious invasion!

AFV Club rocks the LVT-4

Cavalry Scouts: A beginner's guide to the M1127 Stryker

Jungle Rot: The Tamiya Komatsu G40 tractor in 1/48

Making it at Factory 112: The AFV Club T-34-76 Model 1942

War Pig: Gettin' piggie with the Tasca fantasy tank

MMiR: with more adjectives than ever before!

2012, a Dump Truck Odyssey: a masterpiece in styrene and resin

ASCZ wreckin' ball: wreckin,' AArmour style!

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35

C O N T E N T S

Cavalry Scouts 24
A beginner's guide to the M1127 Stryker Reconnaissance Vehicle.

Jungle Rot 30
The Tamiya Komatsu G40.

Amphibious invasion! 36
AFV Club rocks the LVT-4 Early Version.

Be my Valentine? 44
The first of many Mini-Art Valentines hits paper here.

Making it at Factory 112 50
The AFV Club T-34-76 Model 1942.

War Pig 56
Gettin' piggie with it. The Tasca 1/72nd scale fantasy tank.

2012: a Dump Truck Odyssey 62
Two Spanish modelers create a masterpiece in styrene and resin.

ASCZ wreckin' ball 74
It's heavy wreckin,' Accurate Armour style!

Features

Short Takes 8
Our look at all the latest dope from around the world.

Mini-Men 68
The usual peek at what's new on the figure front.

ON THE COVER:

Get ready to get wet with an extensive look at the brand new AFV Club LVT. Jeff's review takes us down LVT road and ends up parking us right in painting and reference town. The whole sordid story starts on page 36. Be sure to check out Superdope's excellent examination of the Diamond T 4-ton wrecker. This offering from Accurate Armour is the ultimate multi-media soft skin. Our post-Mini Men treat, this one starts on page 74.

From Your Editor

The State of the Hobby

So, what's going on around the hobby these days? In spite of a worldwide weak economy and shrinking consumer confidence, plastic kits are being released in droves—and not just any plastic kits. These are the kits of your dreams, things you had never thought you'd see in plastic.

Much, if not all, of this plastic proliferation is due to our friends in China. Thanks to the investment of one or two companies, sophisticated tooling equipment is now accessible to a wide range of design teams. Also contributing is the greater ease by which these design teams can execute their visions. Advances in software design have provided relatively inexpensive methods for realizing all types of vehicles within the virtual environment. Then, it's just a matter of coming up with the scratch to tool it and fill the resulting molds with styrene.

Just a few years ago, Bronco, Trumpeter and HobbyBoss were just minor players in the industry and now their lines have ballooned. We now have a styrene M1070, Landwasserschleppers, Neubaufahrzeugs, MRAPs and even the long dreamed of Chaffee.

Not to be outdone by these newcomers, Dragon forges ahead with a veritable onslaught of models. They also continue to raise the bar with more and more unique features and detail. One of my favorite things about Dragon is their willingness to make their very old kits obsolete with stunning new versions. Most significant among these new incarnations are the line of Panzer IVs and Panzer IIIs. Both started out as modifications of the older Gunze Sanyo molds and they are now nearly complete lines of newly tooled beauties.

AFV Club hasn't been sleeping either. After a few perplexing forays back and forth into WW2 German themes, they have plunged back into their forte: Allied and modern subjects. The Churchills keep coming and their new LVT series is getting everyone very excited. At press time another version has been announced and it looks like the M42 Duster is finally present in all three plastic dimensions.

Even Tamiya, after a few false starts, finally coughed up a one hundred percent all-new styrene kit in the form of the Israeli M51. I am surprised that they have not been more active. I saw a video interview with Mr. Tamiya about two years ago where he stated that the company would be stimulating the modeling economy with new releases. I guess he didn't mean armor.

The competition has got to be getting to Tamiya. After all, they practically had the market to themselves for decades. I am a little taken a back at just how closely all the various manufacturers compete. There is quite a bit of overlap on topics and this seems to be such a waste. If also makes me think that the effort spent on these duplications could be redirected to other more desirable subjects. Case in point is the Neubaufahrzeug. The Germans only made five of them and now we have nearly as many kits. All that Neubaufahrzeug effort resulted in a brand new company: Amusing Models. There has got to be a story behind that. I wonder if their release was the result of some disaffected design team that decided to market the kit on their own after a falling out with their client—just speculation on my part.

Also brand new on the scene is the Chinese firm of Riich, whose name rather defies translation. It is also the name of a Chinese car company, but the two appear to not be related. They surprised everyone with two new releases; the MaxPro and the RSO tractor.

Like Riich, Kinetic Models came out of nowhere with yet another MRAP (the M-ATV), but also a newly tooled M109—unexpected, but welcome. The same is true of Panda with their own M-ATV Oshkosh MRAP.

So what's next? With few remaining subjects left, speculation is easy. It's the timing that is impossible to predict. Until the 2012 Nuremburg Toy Fair, I would have said the SdKfz 9 halftrack, but Trumpeter debuted built up kits of the artillery tractor (listed as 01583) and the version with the rear-mounted 8.8cm gun at the show. This follows the fully armored version, so that makes a complete set. If you're keeping tabs, this now completes the range of German WW2 halftracks available in plastic.

As far as WW2 German goes, little else remains. HobbyBoss showed artwork for the SdKfz 254, one of the more obscure vehicles of the war. The SdKfz 231 series of armored cars is now an AFV Club subject.

I wouldn't mind seeing the SdKfz 263 six-wheeled armored car committed to plastic in a more competent manner. The Bergepanther is a rather glaring omission. The ball certainly seems to be Dragon's court on this one, as they lead the way with their excellent Panther kits. An updated version of the Panzerwerfer 42 would also find a place on many shelves, as would new renderings of the various Maultiers.

On the Allied side, Dragon has promised an M3 Lee and I, like others, are hopeful they will deliver. Tasca continues its Sherman mission with the M32B1. Some would like to see the M3 Lee in the Tasca line-up. However, many, including me, would like to see Tasca carry on with its clean-up the Sherman line. Tooling-wise, they are closest to the Pullman M4, which is just a kissing cousin to their Pullman M4A2 (kit 35-018). Ditto on their direct vision M4A2. This is rendered as a Fisher tank and it could become a Baldwin M4 with little work. Furthermore, a high bustle turret shell would net them an M4A3 75mm (W) VVSS, an M4A3 105mm VVSS and even an M4A3 105mm HVSS.

Post-WW2 armor is still wide open. Who ever decides on the M48 Patton will reap the benefit of the M48, M48A1, M48A2, M48A3, M48A5 and parts for the M51 and the M103 (if they are bold and brave). The M47 could use a makeover and while you're at it, throw in a new M46, too.

I'd love to see AFV Club get back to those modern roots of theirs. They would be my pick for the Pattons. At one point, I was certain that we would get a 5-ton M54 from them and I still have my fingers crossed.

Really, this just scratches the surface, as there are many other worthy modern subjects. All manner of soft skin vehicles are possibilities, as is the range of Bundeswehr armor. Can you say, "Leopard 1?"

Dream-on

And so I continue to dream—or should I say I continue to wait for my dreams to come true? It's all bound to come our way sooner or later. Until then, I will try to stay busy with the approximately 150 models I already have!

—Pat Stansell

www.ampersandpubco.com

MILITARY MINIATURES in REVIEW

I whip MY hair back and forth
PAT STANSELL

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Short takes

what's new, anyway?

AC Models

It comes as no surprise that Andrew Cairns soldiers on with the ANZAC theme for his latest large scale figure release: **16007, 1:16 Australian in Korea.**

In 1:35 scale, beards and Oakleys are all the rage for **35002, Special Forces Humvee Crew, Afghanistan.** Anyone needing to fill some Humvee seats will want to take a look at these. We got a sample of this set recently. They are nicely cast and easy to assemble. We did some looking around on the web and found AC Models available in the U.S. at Military Miniatures Warehouse (**www.milminwh.com**). You can also order direct by sending an e-mail to **amcairns@paradise.net.nz**

Accurate Armour

The latest in tasty resin full kits from our buddies at Accurate Armour is the **Alvis Saladin FV-601**. This 6-wheeled armored car was very successful both domestically and as an export for the British during the '60's and '70's. You can get it with or without an interior: **K131, SALADIN Armoured Car, $75.00** and **K131i, SALADIN Armoured Car with Interior, $100.00**. The version with an interior includes detail parts for the fighting compartment, turret AND engine compartment.

Accurate also whipped out a nifty power pack set for the Challenger 2: **A148, Challenger-2 MBT Power Pack, $37.50** and **A149, Crane Lifting Beam Set, $10.00** are tailor-made to depict A148 dangling from a wrecker.

Here's some stuff to dress up a Land Rover: **LRA008, Alloy (15 Spoke) Wheel Set, $10.00; LRA009, Alloy (12 Spoke) wheel set, $10.00** and **LRA010, TUAAM Wing boxes & Aerial Bases, $6.67.**

To round things out are some AFV bits and pieces: **A146, ASU85 Mantlet Cover, $6.67; A151, T55 Series Mantlet with KDT-1 LRF, $**

6.67; A152, Dingo Crew Cover & Stowage, $10.00 and **C48009, Cromwell Cupola Set, $7.50.** Order direct any time from **www.accurate-armour.com**

AFV Club

Eight wheels of Wehrmacht road-trippin' madness come your way now from AFV Club as **AF35231, Early Type Sd.Kfz.231 Schwerer Panzerspahwagen.** Yes, we have all been waiting a long time for this. It is here. Give thanks, and then build it.

We've been hearing rumors of a Valentine from these guys for a while. It has landed: **AF35178, British Infantry Tank Mk.III Valentine Mk.I.** We got a sample recently and boy is it sweet. Link to link tracks are also available right now as **AF35197, Valentine Tank Track (Workable)**.

An AFV Club update is not complete without a new Chruchill variant: **AF35155, Churchill Mk.V 95mm/L23 Howitzer.**

The same goes for the redoubtable U.S. 105 mm gun: **AF35191, 105mm Howitzer M101A1 & Carriage M2A2.** This is the

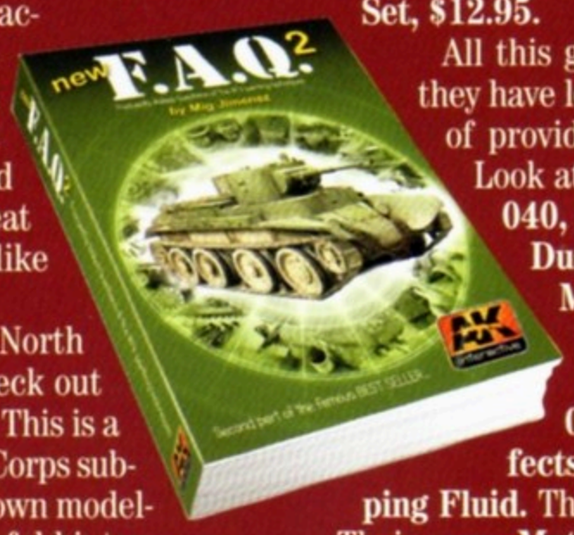
post-war version that helped with landscaping in the Korean and Vietnam wars. The late version of the U.S. 3-inch anti-tank gun is out now too: **AF35181, U.S. 3-Inch Gun M5 on Carriage M6.**

Need any ammo? Here you go: **AG35031, U.S. 3-Inch Gun Ammo Set; AG35032, US 76mm Gun Ammo Set Brass** and **AG35033, US 75mm Gun Ammo Set Brass.**

Last but not least are three sets for making the optics on your modern tanks look just right: **AC35012, Sticker for Simulating Anti-Reflection Coating Lens, Suitable for M1A1/M1A2 Abrams; AC35013, Sticker for Simulating Anti-Reflection Coating Lens - Suitable for BOTH Leopard 2 A5 and A6** and **AC35014, Sticker for Simulating Anti-Reflection Coating Lens - Suitable for Merkava MK.IV (3 Vehicles).** AFV Club is imported to the U.S. by Merit International (**www.merit-intl.com**).

AK Interactive

Some of you may remember a great step-by-step book by Mig Jimenez from a couple of years ago called "FAQ." AK interactive has now released a sequel: **038, FAQ II, $79.95.** This is a new and improved guide (over 300 pages and 1,400 photos) to all those great weathering techniques like chipping, dirt, mud, etc.



If you dig the whole North African campaign thing, check out **1211, D.A.K Book, $27.50.** This is a showcase of German Afrika Corps subjects by some of the best-known modelers on the scene today. Helpful hints on desert weathering and creating diorama bases are a prominent feature of this book.

AK has decided to dive into the markings niche lately: **105, 1:35 Late German Balkankreuz (1943-45), $11.95; 106, 1:48 and 1:72 Late German Balkankreuz (1943-45), $11.95; 109, 1:35 German Number Black, $11.95** and **110, 1:35 German Numbers White, $11.95.** They are also marketing some masking sets for German Disc camouflage seen on late-war vehicles: **157, 1:35 German Disc Camouflage Mask Set, $12.95** and **158, 1:48 German Disc Camouflage Mask Set, $12.95.**

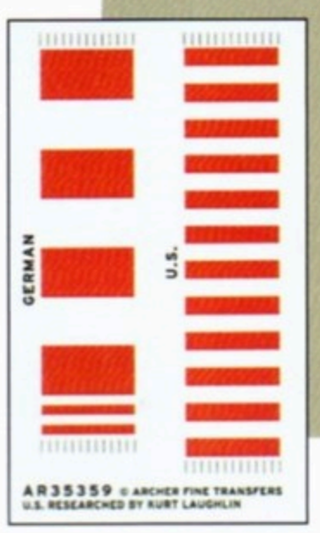
All this good news does not mean that they have left off with their primary thrust of providing neato weathering effects. Look at this list: **039, Black Pigment; 040, Light Dust; 041, North Africa Dust; 042, Europe Earth; 043, Medium Rust; 044, Light Rust; 048, Pigment Fixer; 081, Dark Earth; 085, Track Rust; 086, Dark Steel; 088, Worn Effects Fluid;** and **089, Heavy Chipping Fluid.** The aforementioned are all $5.95. Their new **Metal Burnishing Fluid (159), $12.95** is their version of Blacken-It that you use to weather Fruil metal tracks.

Let's not forget these two nifty paint sets: **160, Color Modulation Set: Panzer Grey, $20.95** and **167, German Green & Brown Modulation Set, $20.95.** To shop for AK Interactive, type **www.ak-interactive-usa.com** (U.S.) or **www.ak-interactive.com** (for the rest of you great people) into your browser.

Archer

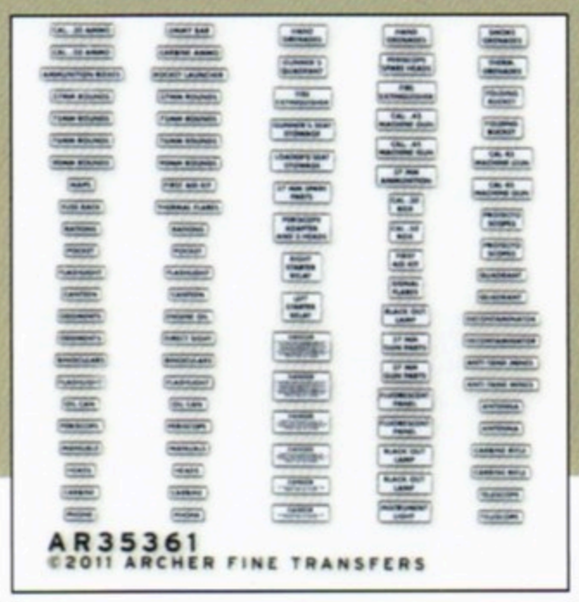
Life before Archer was a pretty drab affair. Thankfully, we can look forward to a bright and glorious 2012, at least until December 22nd... Damn Mayans!

Anyway, let's take a look at the new stuff, shall we? The new 1:35 scale dry transfer sets **AR35358, Pz.Kpfw.IV Instruments and Placards, $7.95; AR35359, German and U.S. Aiming Post Stripes, $5.95;** and **AR35361, U.S. Interior Stowage Labels, $7.95.** If you need to add some flavor to your 'Nam gun truck or ACAV, try **AR35360, Vietnam War Era Pin-ups and Men's "Girlie and Adventure Magazine" Covers, $6.95.**



Archer hasn't given up on that great wet transfer decal line either: **AR77016, Medical and Miscellaneous German Shipping Crate Stencils, $6.95** and **AR77017, Panther and Tiger Tank Stencils** and **Markings, $6.95** are perfect for your next German WWII subject.

Probably the coolest things from Archer lately are their 3-D resin details. Here are some new additions to the line that will come in handy for scratch builders and detail fiends: **AR88063, O-scale Rivets for Streetcars and Interurbans (7/8"), $17.95; AR88064, O-scale Rivets for Streetcars and Interurbans (5/8"), $17.95; AR88066, HO-scale Rivets for Streetcars and Interurbans (7/8"), $8.95; AR88065, HO-scale Rivets for Streetcars and Interurbans (5/8"), $8.95; AR88067, HO-scale Treadplate, $17.95** and **AR88068, O-scale Treadplate, $17.95.**



Archer hasn't forgotten about those figures you are building either: **AR99062, Volkststurm Armbands, $6.95** is all that the title says and more.

Get your Archer fix by ordering direct from the source at **www.archertransfers.com**

Alpine

The new 1:16 scale offering from Alpine is **16015, Kurt Meyer LSSAH 1941, $50.00.** Look at the picture. He's screaming, "Buy Me!" in German.

As for 1:35 scale, it's a pretty mixed bag this time around. But don't worry; there are still some German tank crewmen in the list. Master Taesung (the Alpine Führer) knows you can't go without. Look for these in coming editions of Mini Men: **35123, Italian AFV Officer, $16.50; 35124, Italian AFV Crew Set, $30.00; 35125, DAK Fallschirmjager #2, $16.50; 35126, DAK Ramcke Brigade Set, $30.00; 35127, Russian Scout #1, $16.50; 35128, Russian Scout #2, $16.50; 35129, Russian Scout Set, $30.00; 35130, German Panther Commander #1, $16.50; 35131, German Panther Commander #2, $16.50** and **35132, German Panther Crew Set 2 figures, $30.00.** It stands to reason that you're gonna want to take a closer look, so here's the web address: **www.alpineminiatures.com**

Blue Star Model Company

Blue Star has just one product so far, but it's something everyone will appreciate. Drum roll, please... It's a **1:16 German Hetzer Jagdpanzer 38, $250.00!**

This big scale version of everyone's favorite little Czech-built, German-used tank destroyer has parts to do either and early or a mid-production version. It comes with an adjustable suspension and movable gun mount, link-to-link tracks, and three sheets of photo-etch. To take a closer look and order yours, go to **www.bluestarmodel.com**

Bravo 6

More Devil Dogs from the Vietnam era are out now from Bravo 6. It's so cute to watch Pat play with these in the sand box.

Anyway, there are three new sets in the Tet sub-line: **35036 USMC(8) Fallen Comrade Tet '68; 35037 USMC (9) Baitin' the Hook Tet '68** and **35038 USMC (10) Bro's Shoulder Tet '68.**

If you are looking for some French flavor, try **35202, "Huguette" Agony (2) French MGunner DBP '54.** We hope to see more of these French Indochina war subjects. They're a real breath of fresh air. Keeping up with Bravo 6 is easy, just bookmark **http://bravo6.diorama.ru**

Bronco

The big news from Bronco has to be **CB35100, 'Buffalo' 6x6 MPCV (2004 - 2006 Production), $82.95.** We can't wait to get a closer look at this one.

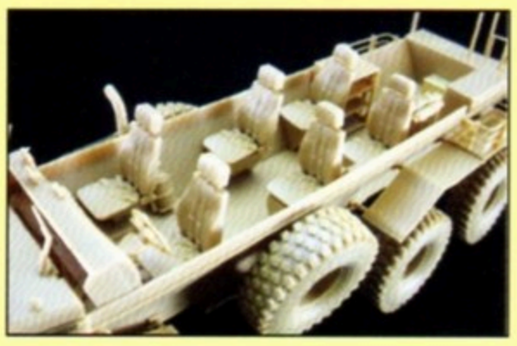
Bronco is pounding on the British theme lately. In 1:35 scale, they released some new variants of their base kits: **CB35046, QF 25pdr Field Gun Mk.II/I w/ No.27 Ammunition Limber, $34.95; CB35068, Light Tank M-24 (British Army), TBA; CB35077S, British Valentine 25pdr SP "Bishop" w/No. 27 Ammunition Limber Special Edition $72.95** and **CB35085, British Humber Armoured Car Mk.II, TBA.**

Their latest figure sets have the same flavor as well: **CB35084, British/Commonwealth Bofors Anti-Aircraft Gun Crew Set, $18.95; CB35087, British 17pdr Anti-Tank Gun Crew Set, $17.95; CB35098, British/Commonwealth AFV Crew Set, 18.50** and **CB35108, British 25Pdr Gun Crew Set (W.W.II N.W.Europe), $18.95.**

Two new variants of that nifty 1:48 scale Staghound will leave you exhausted but satisfied: **ZB48002, T17E2 Staghound A.A. Armoured Car, $32.95** and **ZB48003, T17E1 Staghound / Canadian 60lb Rocket Launch Version (2 Options In 1 Kit), $32.95.** These have lots of tiny parts. Get your tweezers ready.

If you are in the mood for something completely different, look into **CB35103, German Telemeter KDO Mod.40 w/Sd.Anh 52 Trailer (Kommando-Gerät 40), $29.95.** This was the fire control unit used for German FLAK units in WWII, particularly the 88mm.

For artillery fans, Bronco expands on a theme with: **CB35102, 155mm Howitzer M114A1 Vietnam, $38.95.** They have barrels for the 155 now too: **AB3554, Aluminum Gun Barrel for U.S. 155mm Howitzer M1A1 (35073), $8.50** and **AB3555, Aluminum Gun Barrel for U.S. 155mm Howitzer M114A1, $7.95.**



Speaking of variants, here are two German and two Chinese goodies: **CB35044, Sd.Kfz. 6/1 Mittlerer Zugkraftwagen 5t (BN9b) Artillery Version, $59.95; CB35088, PLA WZ-701 Armoured Command & Control Vehicle $39.95; CB35089, Bruckenleger Auf Pz.Kpfw. II ausf D1, $44.95** and **CB35094, Chinese Type 63-2 (YW-531B) Armored Personnel Carrier $39.95.**

Don't forget about their insane track sets: **AB3553, T-16 Workable Track Set for M-3/M-5 Stuart, $14.95; AB3552, T-36E6 Workable Track Set For M-5/M-8 Stuart, $14.95** and **AB3549, Valentine Mk. I Early Workable Track Set, $14.95.** Look at Bronco online at either **www.bronco-model.com** or **www.dragonusaonline.com**

Concord

Last time we checked in with Concord, they had three new titles hot off the press. These are all WWII German-type references. Look for a full review of **6536, Battles of Smolensk & Roslavi 1941, $18.95** in our book reviews section. The other titles, **6538, The Siege of Sevastopol and the Crimea Campaign 1941-42, $18.95** and **7073, Panzer VOR! 6 - German Armor at War 1939-45, $19.95** are out now and easy to find at **www.dragonusaonline.com** in the U.S. For the rest of the world, look no further than **www.concord-publications.com**

DEF Model

DEF Model is a relatively new Korean company that makes resin accessory sets and replacement wheels. We went by their website (**http://defmodel.com/**) to see what the ruckus was all about. As far as the accessory sets go, here's the list:

DK35002, KM900, 'R.O.K ARMY' LAV Kit; DM35001, M60A1/3 Turret Set, $30.00; DM35002, M60 Family Detail Up Kit, $18.00; DM35003, K9 ROK Army SPH Detail Up Kit, $70.00; DM35004, IDF Sho't Kal '1982' Conversion Kit, $45.00; DM35006, US Jersey Barrier set (Wide type), $16.00; DM35007, US Jersey Barrier set (Narrow type), $16.00; DM35008, Humvee Stowage + MT Tire Set, $25.00 and **DM35009, Humvee Stowage + MT/R Tire set (Academy), $25.00.**

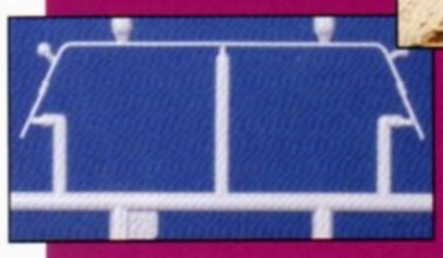
As for wheel sets, take your pick of the following: **DW30001, WWII Schwimmwagen Wide Wheel set (Tamiya), $14.00; DW35002, M1151 HMMWV MT/R Sagged Wheel Set (Academy), $16.00; DW35003, M1114 HMMWV MT Sagged Wheel Set (Bronco/ Tamiya), $16.00; DW35004, M997/M1046 HMMWV R/T II Sagged Wheel Set (Tamiya), $16.00; DW35005, ShKH DANA Vz.77 MP913 Sagged Wheel Set (Hobbyboss), $28.00; DW35006, ShKH DANA Vz.77 MP914 Sagged Wheel Set (Hobbyboss), $28.00; DW35007, LRDG Wolf 'W.M.I.K' G90 Sagged Wheel Set (Hobbyboss), $14.00; DW35008, LRDG Wolf 'W.M.I.K' Mich.235 Sagged Wheel Set (Hobbyboss), $14.00; DW35009, M1117 Guardian ASV Sagged Wheel set (Trumpeter), $16.00; DW35010, Stryker/LAV-III Sagged Wheel Set, $30.00; DW35011, LAV-25 SLEP Sagged Wheel set (Trumpeter), $24.00; DW35012, B1 "Centauro" Sagged Wheel set (Trumpeter), $28.00; DW35014, JGSDF LAV 4x4 Sagged Wheel set (Tamiya), $16.00; DW35015, BOXER MRAV Sagged Wheel set (Hobbyboss), $30.00** and **DW35016, JGSDF Type 96 WAPC Sagged Wheel set (Hobbyboss), $24.00.** We liked what we saw from this company and will keep you updated

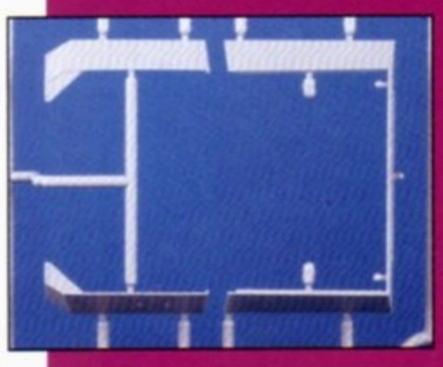
Dragon

Did you say you wanted something German? Well, that's good because the Big D has certainly delivered. A glance at the following will bring tears of joy to many: **6533, Sd. Kfz. 7/1 2cm Flakvierling 38 w/Armor Cab, $59.95; 6558, Pz.Kpfw.III Ausf. M w/Wading Muffler, $47.95; 6575, Pz.Kpfw. IV Ausf. J Last Production; 6580, German Infantry Barbarossa 1941, $12.95; 6581, StuG.III Ausf. G, Dec 1943 Production, $49.95; 6589, Jagdpanzer IV L/70(V) Aug 1944 Production w/Zimmerit, $54.95; 6677, Sd.Kfz.10/5 w/Armor Cab fur 2cm FlaK 38, $43.95; 6690, Neubau-Fahrzeug Nr.3-5, Rheinmetall-Fahrestell und Krupp, $64.95; 6692, German Fighting Elite in the East, $12.95; 6702, Conquerors of Sevastopol Crimea 1941-42, $11.95; 6703, "March to the West" Western Front, 1940, $11.95; 6704, German Waffen Grenadiers 1944-45, $11.95; 6710, leFH18/40/2 (Sfl.) auf G.W. Pz.Kpfw.III/IV, $69.95; 6713, sIG.33 auf Fgst.Pz.Kpfw.III (Sfl.), $49.95** and **6735, Operation Typhoon 1942, $11.95.**

We also stuck in a few shots of the previously released Bison II.

The Cyber Hobby sub-line offers some tasty variations of some of Dragon's favorite themes as of late: **CY6630, Sd.Kfz.10 Ausf.A 1940 Production, $46.99; CY6680, German 3t 4x2 Cargo Truck with 2cm FlaK 38. $50.99; CY6681, SAS 4x4 Desert Raider with 50cal M2 Machine Gun, $31.99; CY6699, IJN Type 2 (Ka-Mi) Amphibious Tank w/Floating Pontoon, $71.99; CY6716, German 4 x 2, 3t Cargo Truck (Early Type Platform), $39.99** and **CY6717, Pz.Kpfw. III (3.7cm) (T) Ausf.F "Operation Seelöwe," $76.99.**





The budget conscious will be interested in what's in store for The Orange Box line: **9131, Jagdpanzer IV A-0 + Panzer Lehr Division Figure Set and Magic Track, $29.95; 9135, Sd.Kfz.251 Ausf.C + German Infantry in Action 1941-42 Figure Set, $29.95** and **9136, Sd.Kfz.143 Pz. Beob. Wg.III Ausf. H + German Tankman Figure Set, $29.95.**

Dragon also seems to be doing quite well with their 1:72 scale kits. They show no sign of slowing down: **7385, Pz.Kpfw.III Ausf.L Late Production, $17.50; 7389, LVT-4 Water Buffalo & 1/4-Ton 4x4 Truck $19.95; 7395, IJA Type 97 "Chi-Ha" Early Production, $14.50; 7402, IJA Type 95 "Ha-Go" Light Tank North China Version, TBA; 7434, Tiger I Mid Production w/Zimmerit & Kubelwagen, $19.95; 7419, Kfz.69 6x4 Truck & 3.7cm PaK 35/36, $17.50; 7424, British Churchill Mk. IV, $17.50** and **7435, IJN Type 2 (Ka-Mi) Amphibious Tank Combat Version, $17.50.**

On a final note, we have the re-release of one of their helicopter kits: **3527, AH-6J Little Bird "Night Stalkers," $36.95.** The scoop on Dragon can be found in two places: **www.dragon-models.com** and **www.dragonusaonline.com**

D Toys

We think D Toys is just plain nifty. The latest from them is a bounty of fresh, rosy smelling resin that will leave you drooling.

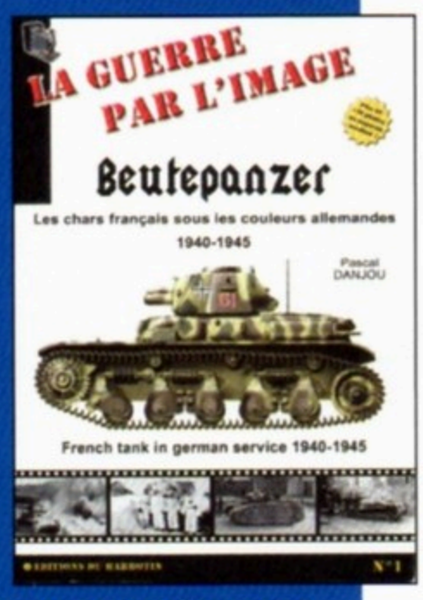
Even if 1:48 choppers don't float your boat, you will find **48-005, US Helicopter crew Set (3 Figs), $24.99** and **48-006, US NAVY SEAL Team Set (4 Figs), $28.99** to be really cool. We're not really sure what niche **48-007, Special Force CRRC Boat Set, $19.99** fits into yet, but maybe D toys will have some figures to crew it in the near future.

The news in 1:35 scale is plentiful and all good: **35-025, Swedish CV9040B Accessories Set 3, $26.99; 35-026, M998 Canvas Cover Set, $31.99; 35-027, R.O.K Army Tank Crew, $26.99; 35-028, Modem US Driver Figure Set, $26.99; 35-029, Modern USSR Tank Crew Set, $26.99; 35-030, Modern US Driver Figure Set 2, $26.99; 35-031, Modern US Sniper Team 1, $28.99; 35-032, I.D.F. Tank Crew Set, $25.99; 35-033, Modern US TOW Gunner Set, $25.99; 35-034, Modern US Infantry Equipment set 2, $25.99; 35-035, Panzer Tank Ace #1 (Wittmann), $13.99; 35-036, SS Tank Crew 1944, $13.99; 35-037, HUMVEE Wheel Set #1, $19.99; 35-038, HUMVEE Wheel Set (M1151) #2, $19.99; 35-039, US Marine AH-1W Heli Crew Set, $25.99; 35-040, Bundeswehr Tank Crew Set, $25.99; 35-041, Modern British Army Set, $32.99; 35-042, Modern US Driver Figure Set, $40.99; 35-043, Vietnam War US Infantry Equipment Set, $21.99** and **35-044, German Boxer MRAV Wheels and Driver Set, $35.99**. As you can see, these guys know how to cover the bases pretty well.

If you want to do a little research on the list you see here, stop by **www.divisionmini.com** and you can shop D Toys up at Lucky Model (**www.luckymodel.com**).

Editions Du Barbotin

Okay folks, let's take a moment to catch up with our favorite little French publisher. Two titles from their "Focus" series out now are **Focus No. 7, Renault R35, €9.95** and **Focus No. 8, Tigre II, €9.95.** Just to re-cap things, the "Focus" series gives you a short background with some period photos, then a walk around of a surviving vehicle followed by some nice color plates.

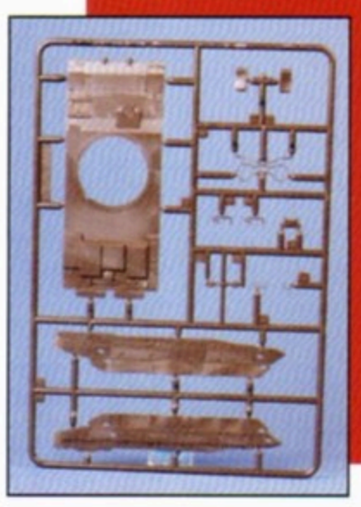


The "Trackstory" series is a little different as it relies more on period photos and and contains more extensive color plates. They have two new titles out in this series: **Trackstory No. 12, The Armoured Cars Citroen Kegresse, €15.95** and **Trackstory No. 13, Le Char B1, €15.95.** Pascal Danjou also dished out a nice surprise lately with **Beutepanzer, €19.95**. This book profiles French armor used by the Germans.

We will have a full review of Beutepanzer for you very soon. In the meantime, swing by **www.minitracks.fr** if you feel the need to slake your thirst for knowledge.

Fujimi

It seems like many years ago when Fujimi boasted a respectable series of 1:76 scale military model kits, so their recent release of the following comes as a nice surprise: **72227, 1:72 Military German Truck, $25.95; 72230, 1:72 Type 10 JGSDF Tank, $22.95** and **72231, 1:72 German Ambulance Truck (Box Type) Desert DAK, $25.95**. The "German Military Truck" is the Opel Blitz. The Type 10 is Japan's latest MBT. It's smaller and lighter than their Type 90, so it's more suitable to the terrain of many locations in Japan. We got a sample of this from Hobbylink Japan (**www.hlj.com**). It looks just grand and we'll have a short profile on it soon. You can also get Fujimi kits from Dragon USA (**www.dragonmodelsusa.com**).



Hobby Fan

HF071, M3 Amphibious Rig is a full resin kit that will definitely get your attention. This is a German-developed amphibious bridging vehicle that is also used by the UK, Taiwan and Singapore. Multiple vehicles can be linked together to bridge large water obstacles and it has a 60+-ton carrying capacity.

Hobby fan also did some nifty conversions for the Academy Hummer: **HF069, HMMWV Recon I and HF070, HMMWV Recon II.**

There were three new figure kits from them last time we checked: **HF710, WWII U.S. Army Gun Crew (II) 1944(France)(4 Figures); HF707, US Marines Gun Crew** and **HF709, British Valentine Tank Crew-4 Figures**. These figure sets are all designed to work with AFV Club kits. Like AFV Club, you can get the scoop on Hobby Fan products from Merit International (**www.merit-intl.com**).

ICM

ICM has been kicking up a little dust lately with some cool new soft skin kits: **35461, Krupp L3H163 WWII German Army Truck; 35475, Kapitän Saloon WWII German Staff Car; 35525, L1500A (Kfz.70), WWII German Personnel Car** and **35531, G4 (1939 production), German Car with Passengers.**

We received a sample of 35531 (from Hobbylink Japan)and were very impressed. These guys have definitely taken a few steps forward with their kit quality.

They also released a figure kit that looks to be a noticeable improvement over previous efforts: **35612, Soviet Staff Personnel (1943-1945)**.

The ICM website is at **www.icm.com.ua** and they are imported to the U.S. by Squadron (**www.squadron.com**)

Firefly Productions (The Oliver Publishing Group)

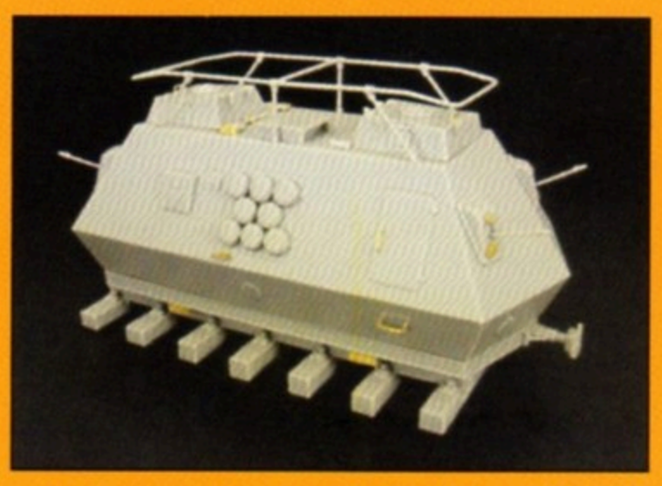
The thunder from down under continues to boom for this little Australian publisher. We heard of three new titles from their U.S. importer, Dragon USA (**www.dragonusaonline.com**): **59368, Westwall: German Armour In The West, 1945, $29.95; 65931, Battleline 1: Workhorse. Panzer III in North Africa, $28.95** and **65937, Battleline 2: Comrade Emcha, Red Army Shermans of WWII, $29.95**. These little books have some of the jazziest color plates available and are terrific if you are searching for that special paint scheme idea...

Their home page is **www.oliverpublishinggroup.com**

Hauler

Hauler has been up to a bit of no good in 1:35 scale lately: **HLU35041, Jagdtiger Early (Tamiya), €13.01; HLU35042, Gaz-AA / AAA (Zvezda-Eastern Express-Toko), €11.32; HLU35043, MB type170V Tourenwagen (MasterBox), €10.92; HLU35044, AB-43, €13.08; HLU35045, Tracks for GAZ AAA / BA-10, €8.76; HLU35047, Steyr 1500 Kommandeurwagen, €13.08; HLU35046, Wheels for Autoblinda AB-41/43, €13.08** and **HLU35047, STEYR 1500 Kommandeurwagen, €13.08.**

They haven't abandoned their 1:48 scale roots and have two new full kits that may pique your interest: **HLS48012, Soviet field kitchen KP-42, €30.00** and **HLS48013, Steyr K2670 Leichter Panzertriebwagen, €74.04.**



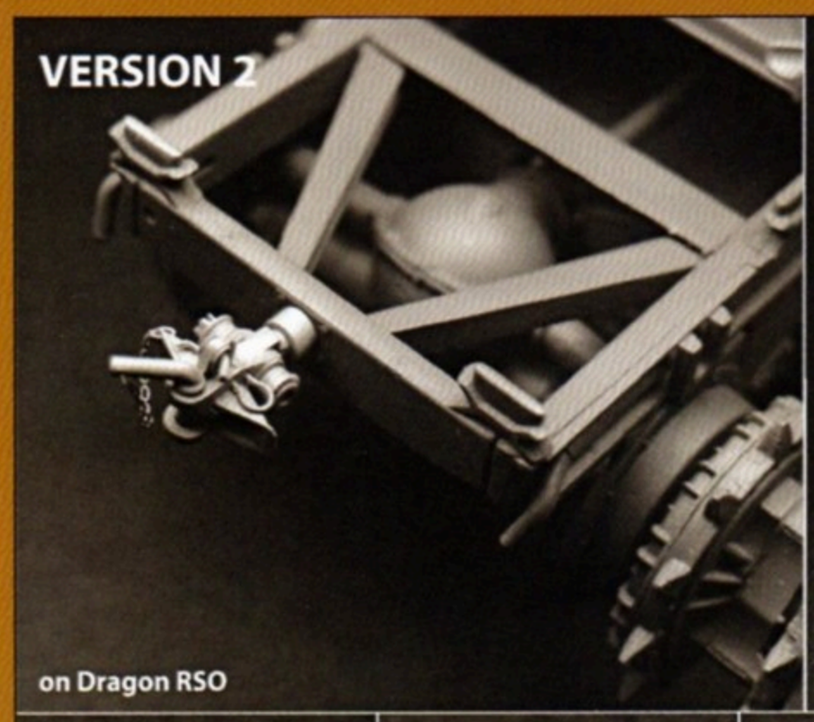
The new photo-etch detail sets in 1:48 scale are: **HLX48316, Pz.Kpfw.II Ausf. A,B,C, €10.44; HLX48317, Refueller BZ-42 (Um), €10.02; HLX48318, PMG-1 Fire engine (GAZ AA), €11.76** and **HLX48319, Staghound Mk.III (Bronco), €11.40.**

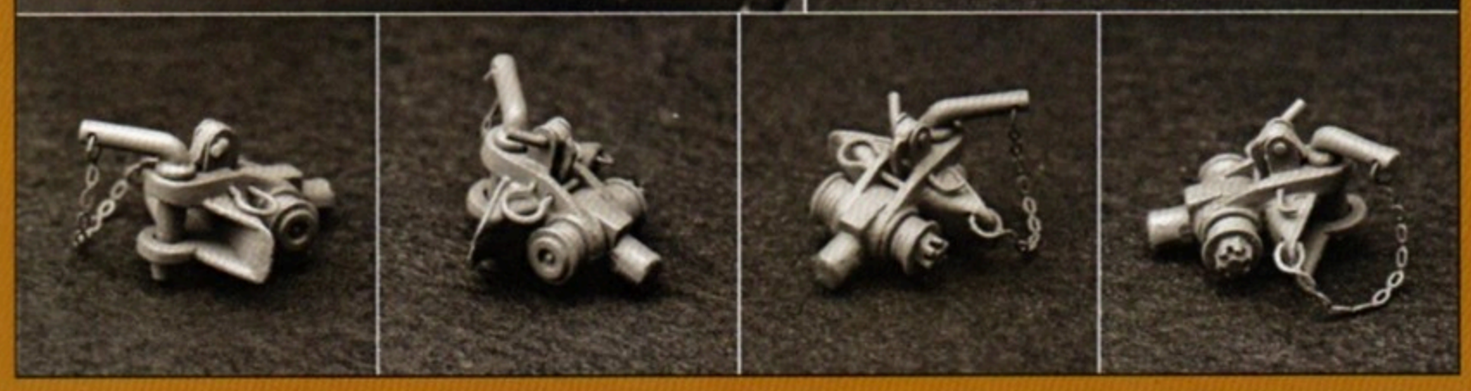
These guys have been expanding on their 1:48 scale diorama accessories, which is good because almost no one else is: **HLF48018, Wooden Tubs, €4.38; HLF48019, Tobacco shop / Newsstand, €16.56; HLF48020, Soviet Thermos Cans, €5.28** and **HLF48021, Buffers- End Track, €12.72.**

Don't forget the new 1:72 scale items: **HLH72009, Steyr K2670 (UM257) (UM), TBA; HLH72010, S.Sp.Pz.Draisine funkwagen (UM) €7.08** and **HLH72011, M4A3 (HAT), €5.28.** Haul your caboose over to Hauler: **www.hauler.cz**

K59

We've got one little detail set from K59's subcompany, 1120 Productions. Its called **Z-06, German Vehicle Rear Tow Pintle**. This tow pintle is designed to replace parts on the Dragon and Italeri RSO kits, but you could also use it to good effect on an Sd.Kfz. 251 or Sd. Kfz. 11 Half Track to good effect. Find out more by surfin' on over to **www.k59production.blogspot.com**





Kit Form Services

Kit Form Services is a British company that specializes in 1:24 scale truck kits. They also have a small range of British military vehicles that are quite impressive. These are complete multimedia kits that include a full power train, suspension, and interior.

From the looks of them, they are well worth the rather hefty price tag.

The new offerings are **FV1801, Austin Champ, $91.66; FV701, Ferret Armoured Car Mk2/3, $104.16** and **FV601, Saladin Armoured Car, $187.50.**

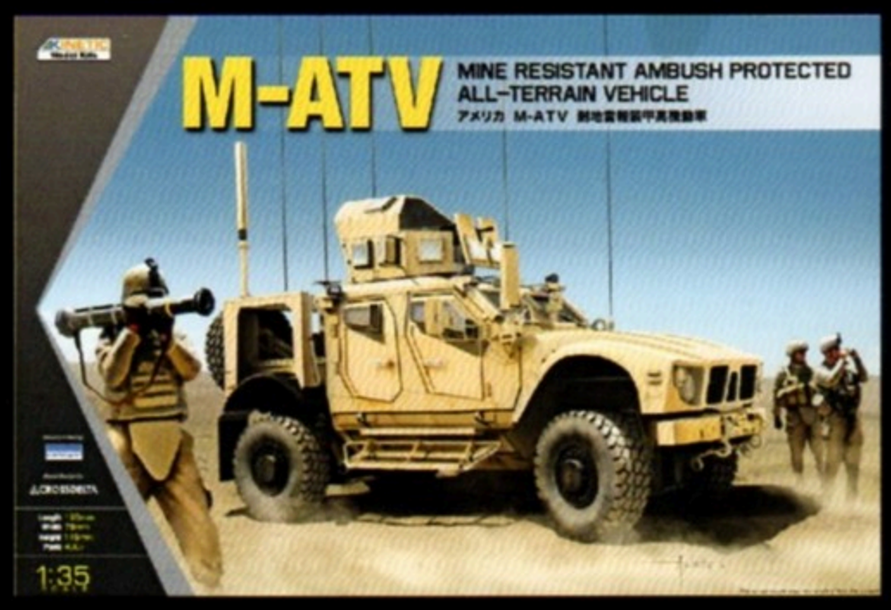
It's interesting that the Saladin is now done by both Kit Form and Accurate Armour. After all these years, now you have not just one but two choices. The Kit Form Services website (**http://kitformservices.com**) has some very nice profiles of their kits and you can order direct there too.

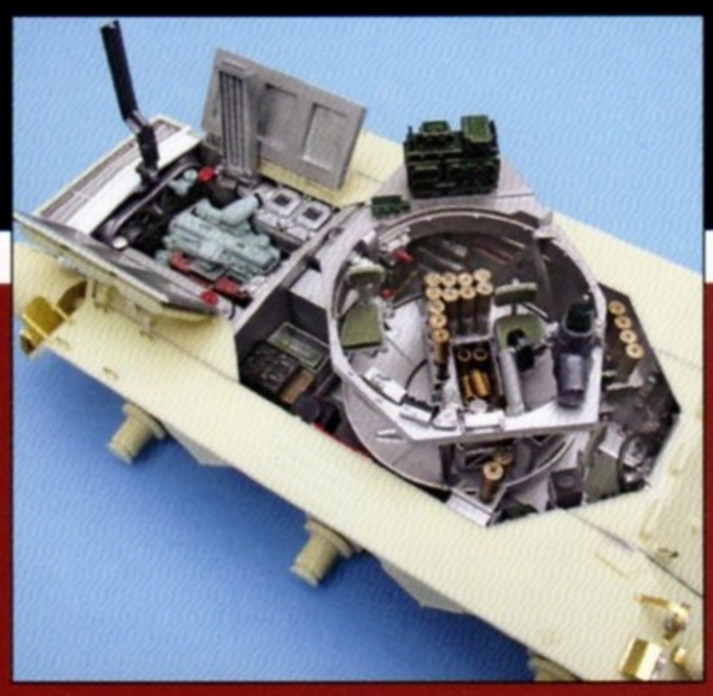
Kinetic Model Kits

We got word of these guys through our good friends at Stevens International (**www.stevenshobby.com**), the go-to guys for Trumpeter.

Kinetic has a pretty good range of modern military jets in 1:48 scale, but that's probably of no consequence to you.

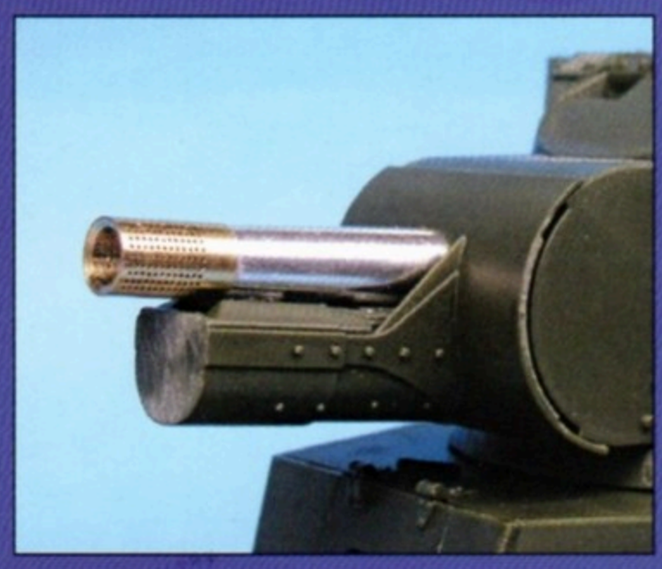
However, these bad boys may float your boat: **61007, MRAP All-Terrain Vehicle (M-ATV), $74.95** and **61006, M109A2 Self-Propelled Howitzer, TBA.** It's interesting to see all the MRAP vehicles popping up in styrene. The M-ATV is the Oshkosh version and has also been kitted by Panda. It will be interesting to see how they compare. The M109A2 promises to be a completely newly tool model, not a re-pop of the ancient Italeri kit.





Lion Marc

As far as aftermarket turned barrels go, Lion Marc consistently gives you a combination of price and quality that is hard to match. The two new additions are: **LM10043, British OQF 75mm Mk.V Barrel, $9.00** and **LM10044, 114mm Barrel for BT-42, $17.50.**



Another thing they have gained some acclaim for is their resin replacement turrets. Here are three brand spankin' new options for your AFV Club Churchill: **LMD33010, Churchill Mark IV Mid Production, $14.80; LMD33011, Churchill NA Mid (includes metal barrel), $22.00** and **LMD33012, Churchill NA Late (includes metal barrel), $22.00.**

Shop for it all at **www.lionmarc.com**

Live Resin

Live Resin is a new company from the gents that produce the Tank from Russia line of figures.

This new venture by them is an effort to produce modern small arms and figure accessories with an unprecedented level of detail.

We got a monster list of stuff from their head honcho, Yaroslav Padalko. This is gonna make your eyes bleed, so get out the Visine.

To start with, they have a variety of M4 carbines and accessories: **LRE35001, US Army M4 carbine with closed rail interface system (Knight's Armament Company (KAC) Rail Interface System) with RAS Picatinny Rail Cover; LRE35002, US Army M4 Carbine with Rail interface system (Knight's Armament Company (KAC) Rail Interface System) without RAS Picatinny Rail Cover; LRE35003, US Army M4 carbine with M203A1 40mm Grenade Launcher; LRE35007, US Army scope set 1; LRE35008, US Army scope set 2; LRE35009, M4/16 magazine set - M16/M4/AR15 Magazine; LRE35010, Insight Technology's AN/PEQ-2, AN/PEQ-15 Infrared Target Pointer/Illuminator/Aiming Laser (ITPIAL)** and **LRE35011, Forward grip set LRE35012, Harris bipod set, opened and folded, Surefire tactical Weapon Lights.**

They also give a bit of special treatment to machine guns: **LRE35013, M249 Squad Automatic Weapon (SAW); LRE35014, M240B 7.62mm Medium Machine Gun; LRE35015, M240B 7.62mm Medium Machine Gun on M122 Tripod** and **LRE35016, M240B Spare Barrels, Ammo Boxes, Ammo Belts.**

The modern U.S. Helmets are some of the best we've ever seen: **LRE35019, US Army ACH/MICH Helmet with Cover and Surefire HL1-A Helmet Light; LRE35020, US Army ACH/MICH Helmet with Cover with Mount Plate NVG PVS 7/14/15 Surefire HL1-A Helmet Light; LRE35021, US Army ACH/MICH Helmet with Cover with Mount NVG PVS 7/14/15 and PETZL Tactical Headlamp; LRE35022, US Army ACH/MICH Helmet with Cover with Mount Plate and Mount NVG PVS 7/14/15 and Covered Goggles and surefire HL1-A Helmet Light; LRE35023, 1/35 US Army ACH/MICH Helmet with Cover with Mount Plate and Mount NVG PVS 7/14/15 and Uncovered ESS Profile Goggles and Surefire HL1-A Helmet Light, PETZL Tactical Headlamp, MS2000 Strobe Beacon Infrared/ Visible Strobe Signal Light, Norotos MICH NVG Mount Assembly, and Goggles Soft Cover; LRE35024, US Army ACH/MICH Helmet with Cover with Mount Plate and Mount NVG PVS 7/14/15 and Downed on Face ESS Profile Goggles and, MS2000 Strobe Beacon Infrared/ Visible Strobe Signal Light, Norotos MICH NVG Mount Assembly** and **LRE35025, US Army ACH/MICH Helmet accessories set - Surefire HL1-A Helmet Light with base, Night Vision Goggles Mount and Base, MS2000 Strobe Beacon Infrared/ Visible Strobe Signal Light, ESS Profile Goggles Covered and Uncovered with Plate and Mount NVG PVS 7/14/15 and Goggles Soft Cover.**

M4 by BRONCO for comparison

Some other accessories sold separately are: **LRE35026, US Army NVG PVS 14 Monocular with Mounts; LRE35027, US Army NVG PVS 15 Binocular with Norotos TATM Mounts; LRE35029, US Army AN/PRC-148 Multiband Inter/Intra Team Radio with and without cover, Thales 25 Palm Speaker Microphone, Comtac II - Peltor Communication Headsets, Sonetronics Radio Handset H-250, Motorola XTS5000** and **LRE35030, US Army Blade Antennae Set.**

If that doesn't impress you, check these ultra-futuristic new rifles: **LRE35035, United States Navy Mark 14 Enhanced Battle Rifle (EBR); LRE35054, USSOCOM SCAR weapon system FN SCAR-L / Mk.16 Close Quarter Combat (CQC) and Close Quarter Combat (CQC) with suppressor military SCAR-D-sd Advanced armament corp; LRE35055, USSOCOM SCAR weapon system FN SCAR-H / Mk.17 Close Quarter Combat (CQC) and Close Quarter Combat (CQC) with suppressor military SCAR-D-sd Advanced armament corp; LRE35056, USSOCOM SCAR weapon system FN SCAR-L / Mk.16 Standard (Std) and Standard (Std) with suppressor military SCAR-D-sd Advanced armament corp; LRE35057, USSOCOM SCAR weapon system FN SCAR-H / Mk.17 Standard (Std) and Standard, (Std) with suppressor military SCAR-D-sd Advanced armament corp; LRE35058, USSOCOM SCAR weapon system FN SCAR-L / Mk.16 Std and CQC with mounted Mk 13 Enhanced Grenade Launcher Module(EGLM) and Mk 13 EGLM with opened stock (with FN Fire Control Unit FCU/GLRF)**; and **LRE35059, USSOCOM SCAR weapon system FN SCAR-H / Mk.17 Std and CQC with mounted Mk 13 Enhanced Grenade Launcher Module(EGLM) and Mk 13 EGLM with closed stock (with FN Fire Control Unit FCU/GLRF)**

By the way, USSCOM SCAR stands for United States Special Operations Command Special operations Combat Assault Rifle. Thank you Wikipedia.

Anyone with the remotest interest in modern subjects will find stopping by **http://live-resin.com/** to be well worth their time. They have a profile of each item as well as reference photos of the real thing! To place your order, shoot an e-mail over to **contact@live-resin.com**

Master Box

Our favorite piece of news from Master Box is the release of another version of their excellent Type 170V kit: **35101, German Staff Car, Type 170V, Kübelwagen, Frühere Ausführung 1936, $44.95**. We got a look at the original kit (35100, Military Car, Typ 170V, Tourenwagen, 4 Turen, 1937-40) and were very impressed with the level of detail. We will try to get back to you on how well it goes together in the near future.

Anyway, on to the figures, which run the gamut this time around: **3584, "German Infantry" Western Europe 1944-45, $14.95; 3589, WWII U.S. Marines in Jungle, $14.95; 3598, LRDG in North Africa (Long Range Desert Group), WWII Era, $14.95; 3599, "Patrolling", Vietnam War Series, $16.95** and **35103, "Cold Wind" WWII German Infantry, $16.95**. The new Vietnam sets are another thing that has drawn our interest lately, as the only people to pay attention to this effort lately have been the resin guys, notably Bravo 6.

If you want to keep up with Master Box, we recommend two places on the web **www.mbltd.info** or **www.dragonusaonline.com**

Masterpiece Models

We've got three new items for the Masterpiece Models update: **MM72001, 1:72 Imperial Japanese Army Tank Commander, $6.95; MMJS001, 1:48 European Style Farm Cart, $19.95** and **MMPT002-A, 1:48 Japanese Steel Pill Box, $19.95.** The tank commander figure is for that cute little Type 95 Ha-Go from Dragon. If you want to find out more, go to **www.masterpiecemodels.com**

Meng Model

Along with Kinetic models that we talked about earlier, Meng is another company that we recently found out about through their U.S. importer, Stevens International (**www.stevenshobby.com**).

If you dig the looks of those Mig productions Hi-Lux kits but don't like resin, Meng now makes two renditions of everyone's favorite "technical." They are **VS1, Dual Cab Toyota Hi-Lux Pickup Truck w/ZPU1 Anti-Aircraft Gun, $39.95** and **VS2, Dual Cab Toyota Hi-Lux Pickup Truck w/M82A1 Rifle, M240B Gun, Equipment, $39.95**. We got to take a look at VS-1. It's pretty nice.

They have recently popped out their very own styrene version of the Minenraumer as **SS1, VsKfz 617 German WWII Minesweeper, $79.95**. This model is based on the unsuccssful Alkett prototype of the Mineraumer that is now housed at Kubinka. Very interesting—wouldn't you say?

Meng's website is at **www.meng-model.com** but there really isn't much to see there right now.

Mig Productions

Modeling without Mig Productions is like cooking without spices, although we do not in any way recommend putting pigments in your food. Since we're talking about pigments, here's the new ones: **P045, Faded Corsair Blue, $6.00; P046, Old Aluminum, $5.75; P047, Dark Granite, $5.75; P048, Faded Green, $6.50** and **P049, Fresh Green, $6.50.**

They also have some new paints from the Abteilung 502 line: **Abt300 German Armor Tones, $28.00; Abt310 Urban Diorama Colors, $28.00** and **Abt320 Vehicle Weathering Set, $28.00**.

Now you've got pigments and oils and you're all ready to go, except you need something to apply them with. What will you do? WHAT WILL YOU DO? Well, Mig now has some nice value-packs for their excellent paintbrushes: **ABT1850010, Scale Modeling Fine Detail Finishing and Chipping Brushes Set #1, $15.00; ABT1850020, Scale Modeling Base-Paint Application and Blending Brushes Set #2, $17.50** and **ABT1850030, General Purpose Modeling Finishing and Effects Brushes set #3, $20.00**. Don't pass these up! They are excellent brushes at a price that sure beats the art stores.

Moving right along... Let's talk resin. There is another version of their now famous Hilux out, **MP 35-292, Damaged Modern Pickup Hilux, $95.00** along with a tasty Trumpeter conversion: **MP 35-374, Iraqi T-62 Conversion, $55.00.**

They released two new figures: **35-334, Medic 82nd Airborne Division, $ 20.00** and **35-333, Marine RTO (Operation Iraqi Freedom), $22.00.**

They have also put out a step-by-step painting guide that will put some zing into your projects: **NV 1003-08, Modulation Style.**

Find out all you ever need to know at **mig productions-usa.com** and **migproductions.com**

Archer

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Mini Art

It's official. Mini Art and prolific are now synonyms. We called Webster's dictionary and had them listed in the same entry. At this point you're probably saying "Stop screwing around and tell me about the new crap!"

So here goes. For full kits, we have **35095, MB 170V Personenwagon, $75.00; 35123, Valentine Mk. VI Canadian-Built Early Production, TBA; 35127, GAZ-AAA Cargo Truck, TBA** and **35130, GAZ-MM Mod.1941 1.5t Cargo Truck, TBA**. From the look of the sprues, the Mini Art kit of the MB170V looks very similar to the Master Box kit. The main difference seems to be that the Master Box kit (35100) is a convertible and the Mini Art kit is a hard top.

The figure kits are: **35070, U.S. Tank Crew (NW Europe), $19.00; 35081, Soviet Artillery Crew on Maneuver, TBA; 35086, German Civilians, $17.25; 35118, British Tank Riders (NW Europe), $22.00; 35121, British Tank Crew Winter Uniform; 35128, Japanese Tank Crew, TBA; 35132, German Tank Crew (Normandy 1944)** and **35135, Close Combat U.S. Tank Crew, TBA.**

The diorama accessories list looks like this: **35549, Metal Fence, TBA; 35551, Wooden Fence, TBA; 35555, European Tiled Roof, TBA; 36008, Italian Village Diorama $52.00; 36023, Dutch Village Diorama, TBA; 36026, Russian Street, TBA** and **36046, Cobblestone Pavement, TBA**. The Mini Art website (**www.miniart-models.com**) provides nice updates and profiles on both their current catalog and future releases. Mini Art is imported to the U.S. by Model Rectifier Corporation (**www.modelrec.com**).

Perfect Scale Modellbau

Perfect Scale is consistently one of the most impressive manufacturers of resin full kits, conversions and accessories that we know of. They mostly concentrate on modern U.S. and Bundeswehr subjects. We dig that.

Right now, they have a new full kit of the M520 as **35070, M520 Goer, €120.50**. The M520 was the standard tactical truck for the U.S. Army until the introduction of the HEMTT.

Perfect Scale sticks to a theme that we highlighted last issue with another rather beefy Leopard 2 Conversion: **35082, Leopard 2A4M CAN with Barracuda Camouflage, €109.95**. This conversion has 89 resin parts and two sheets of photo-etch brass.

Abrams fans will dig two new conversions: **35080, M1A1 Abrams USMC Conversion Kit, €22.95** and **35085, M1A1 Abrams USMC "Afghanistan Version" Conversion Kit, €31.50.**

Some other accessories we saw on their website (**www.perfect-scale.com**) during our last visit include: **35078, Marder Road Wheels, €8.50; 35083, Compressed Air Connectors, €5.45; 35086, US Cal.30 & Cal. 50 Amo Boxes, €5.45; 35087, US Jerry Cans, €5.45; DEC011, Flammable Signs, €5.45** and **DEC016, US MVD Signs, €5.45.**

Perfect Scale also pumped out two new reference DVDs while we weren't looking: **DVD003, Leclerc in Germany, €19.50** and **DVD004, Stryker in Germany, €19.50.**

Miniman Factory

Miniman Factory is made up of a small group of Hungarian madmen dedicated to 1:35 scale heavy hauling trucks in resin.

They have been kinda quiet lately, but we did hear of of two shipping container accessories: **35019, 20lbs ISO freight container incl. Decals for Maersk, Tiphook and US Army, €36.00** and **35020, M915 Extension pack (2 containers and 1 wind-jammer), €76.00**. If you haven't done so, you need to go by their website (**www.minimanfactory.com**) and check out the Russian KrAZ Bridgelayer. It's infrickingsane.

MK35

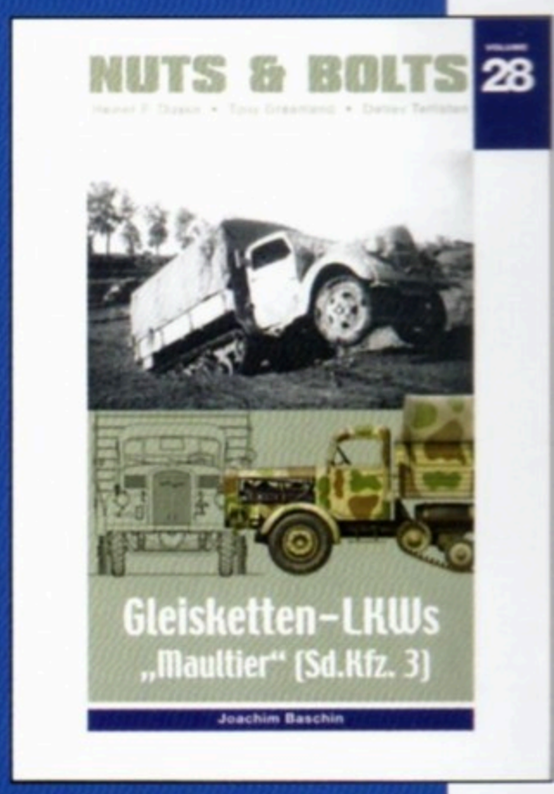
This is one of our favorite little French companies. Their building kits are something special and really deserve more attention than they get. Stop by the MK35 website (**www.mk35.com**) and you'll see what we are blathering about. It's also the best way to order.

Now for the new stuff. Their diorama accessories are: **B020, Norman Street, €55.50; A091, Water or Milk Tank, €19.50; A092, WWII Norman Entrance, €18.50** and **A098, WWII Main Face of Shop (Shop Front) €15.50.**

They also have a nice selection of figures, mostly from the WWII era. The new Mini Men are: **F216, French Soldier Making a Dog Eat, €12.00; F219, Bedouin North Africa 1930 and Post War, TBA; F220, Children X2 Plus Ladder, €24.00; F221, German Driver for RSO 7.5 cm Pak 40, €9.50** and **F222, French Soldier Prisoner, €10.80.**

Nuts & Bolts

Volume 28: Gleisketten LKWs "Maultier" (Sd.Kfz. 3), $52.95 is the latest and greatest all-in-one reference from Nuts & Bolts. There were a lot of different models of the German half-track truck and a lot of options to make great models of them today (think ICM, Italeri, Zvezda). We'll have a full review in the next issue. If you can't wait, shoot out an e-mail to **hfd.duske@t-online.de**



By the way, Dragon USA now carries Nuts & Bolts...

Plus Model

We're not really sure where Plus Models gets their ideas for new products. Some of their kits are about as original as you can get.

Remember, these are the guys that first released a kit of the Mercedes G4, some years ago.

Two of their new additions really got our attention. **403, German Ambulance Kfz. 31 Steyr 640, $118.90** is a full kit of a six-wheeled WWII ambulance. There are 139 resin parts and a sheet of photo-etch along with decals for three vehicles included.

If you have any affection for tractors at all, then **338, Soviet Earthmover Belorus, $179.90** will definitely float your boat. This 232-piece resin kit also comes with photo-etch details, decals and a reference CD.

All of this insanity does NOT mean they have slowed down when it comes to delivering those special little bits and pieces that will give your diorama that peppery Plus Model flavor. This is all in 1:35 scale: **307, U.S. Cameraman, $15.20; 373, U.S. Handcart M3A4, $15.20; 384, City Blocks - Short, $16.50; 387, Antitank Barriers-Hedgehogs, $11.30; 391, Winter Pastime, $17.70; 395, Barrack Equipment, $18.20; 398, Railway Water Pump, €24.10; 399, U.S. Rucksacks WWII, $11.90; 401, Ladders, $8.50; 402, Spa benches, $9.50; 412, Hats, $9.80; 413, Fingerposts - France II, $8.50** and **396, Shoes, $7.70**. If you are a 1:48 scale fan, take a look at: **4044, Chapelle, $10.40.**

Two new 1:35 scale items from the Easy line are: **EL032, Sewer Hatches-Square, $4.40 and EL047, Coat-rack, $4.40**.

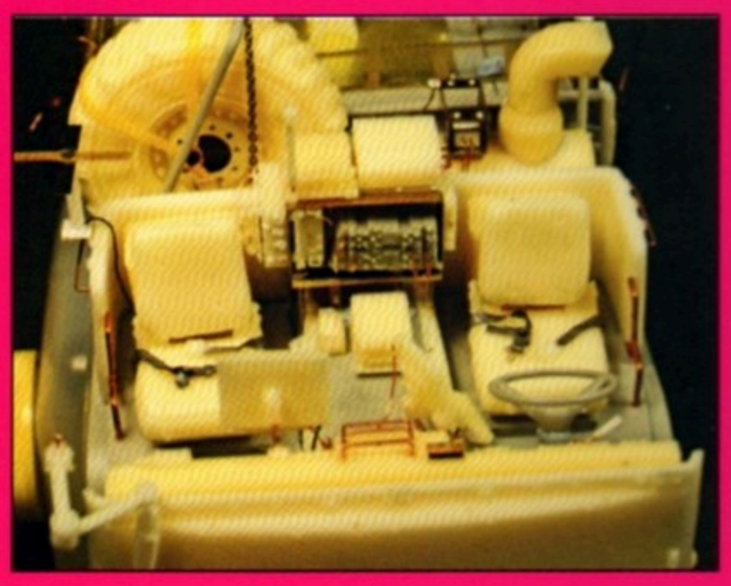
They also premiered a lineup of nuts and bolts for detail freaks: **404-411 Nuts & Bolts, $9.80 (4 kinds, 60 pcs each. 404-0.60mm, 405-0.70mm, 406-0.80mm, 407-0.90mm, 408-1.00mm, 409-1.10mm, 410-1.30mm, 411-1.50mm)**. As usual, order direct at **www.plusmodel.cz**

Pro Art

PAU-35043, Conversion Detail Set For M1078 LMTV Special Forces WAR PIG (Trumpeter), €55.00 is the big news from Pro Art.

We got a sample of this conversion kit. Extensive is the word that comes to mind. The end product is virtually all resin from the fenders up. We guarantee this project would keep you busy for a while.

Adding to the list of bits and pieces guaranteed to make your modern armor subject a little bit better are: **PAU-35044, PSP planking, €16.00; PAU-35045, Modern Military & Civilian Backpacks, €18.00; PAU-35046, Modern Military & Civilian Hanging Backpacks, TBA; PAU-35047, Jerry Can Set for Modern Vehicles, €15; PAU-35048, Modern Equipment Set 2, TBA** and **PAU-35049, US Special Forces Vehicle Communication Set, €14.50.** The jerry can set (35047) is especially welcome as it comes with 35 cans, so you won't need more for quite some time. As with some of the other European resin companies, your best bet is to order direct at **www.proartmodels.be**



Resicast

A lot of the British Armor fanatics out there probably skipped straight to this section after reading the Accurate Armour entry.

So be it. Here's your briefing, gentlemen.

The newest full kit is: **35.1121, Morris C9, €120.00**. This armored car was used during the French Campaign and in the early phases of the North African campaign before being rendered obsolescent because of its light armor and armament.

As a follow-up to their 4.5 inch howitzer, Resicast released the 18 Pounder and appropriate accessories: **35.1218, 18 Pounder & Limber, €69.50** and **35.2339, 18pdr Shells and Casings, €12.50**. This was the standard field gun for the Royal Artillery in WWI and soldiered on until 1942 when the outstanding 25 Pounder superceded it.

Fans of the AFV Club Churchill may want to add Resicast's bridgelayer version to their wish list: **35.1122, ARK Italian Pattern, €99.00**.

We heard rumors of a new Sherman kit: **35.1191, Sherman CRAB Full Kit, €165.00**.

It seems that figures are all the rage these days at Resicast.

We'll take a closer look at some of these in future editions of Mini Men: **35.5624 "The Last Act" Arnhem 1944, €37.50; 35.5625 "Dead Tired" Carrier Crew Sleeping, €37.50; 35.5626 Soldier Sleeping Head on Hands; 35.5627 Soldier Sleeping Arms Crossed; 35.5628 Soldier Sleeping Hands Crossed; 35.5629, Soldier in Great Coat BEF, €12.50; 35.5630, Soldier in Great Coat BEF "Thumbs Up," €12.50; 35.5632, Belgian soldier Régiment Cycliste 1940, €12.50; 35.5633, Peaked Caps British Heads), €8.00; 35.5634, Officer "Leaning" 11th Hussars N.A. 1941, €12.50** and **35.5635, Officer "With Book" 11th Hussars N.A. 1941, €12.50**. We saved the most unique figure for last. It's a 1:9 scale bust: **90001 Commando "The Return from Dieppe."**

There's a new outlet for Resicast in the U.S. called Resin Masters (**http://stores.resinmasters.net/StoreFront.bok**). If you're anywhere else, your best bet is still **www.resicast.com**

Riich Models

New Chinese companies are poppin' up like mushrooms lately.

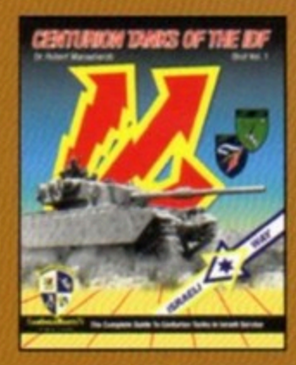
RV 35023, "Road to Victory" WWII British Leader Set, $11.95 is this company's premiere offering. It's a four-figure set that includes Churchill, his daughter-in law Pamela, Montgomery and Horrocks.

If that doesn't excite you, stay tuned. The announced future releases include (MRAP ALERT!) RV **35001, US MRAP 4x4 MaxxPro, TBA; RV 35005 1/35 Radschlepper Ost, TBA** and **RV 35007 1/35 Livestock Set No.I, TBA.**

We got our news on Riich models from Dragon USA (**www.dragonusaonline.com**) and will keep you posted on that livestock set as soon as we know more.

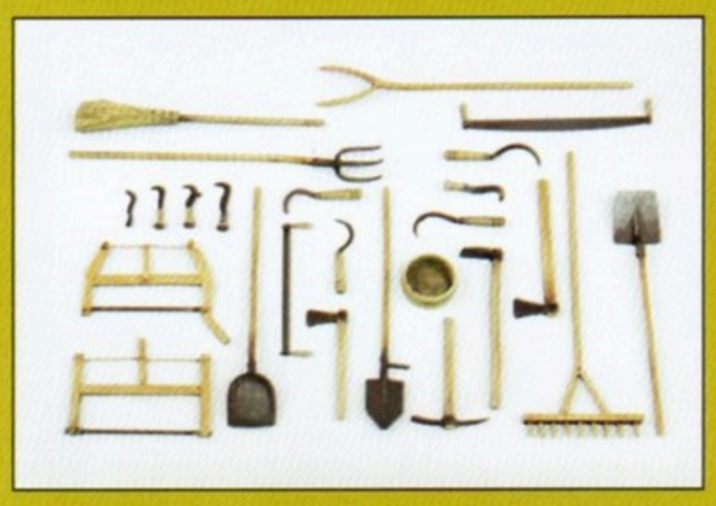
Sabinga Martin

Israeli armor fans rejoice! Dr. Rob (Manasherob) is back and badder than ever with two thrilling new titles: **Israeli Wild & Cruel Cats Series, PUMA - Volume 1, $35.00** and **Volume 1 "Centurion Tanks In IDF Service," $35.00.** That Centurion title is a must have. Pat will be stopping by your house tonight around dinnertime to make sure your family has one for bedtime reading. Order your copies today at **www.sabingamartin.com**



Royal

We really don't have much to say about Royal that hasn't been said before. Their stuff is awesome and the world is an all-around better place with them in it. This update is a pretty mixed bag: **637, Assorted Farm Tools, €27.00; 646, SS Grenadiers (2 figures), €24.00; 647, 1:48 Palm**



Tree, €19.00; 649, 1:72 Palm Tree, €15.00; 650, Tenente Degli Alpini 1915-18 (1:10 bust), €39.00; 651, Factory Corner Ruin, €25.00; 653, Milk Bottles with Crates and Churns, €12.00; 655, Wine Bottles and Crates, €12.00; 656, Factory Ruin with Steam Boiler, TBA; 662, Dogs and Cats, €14.00; 663, Mattresses, €12.00; 664, Assorted Suitcases, €12.00; 665, Civilian Clothing, €9.00; 668, German Tankers Loading-Ammo, €24.00 and **669, Waffen SS Tank Commander with Map, €12.00.**

With Royal, it's best to shop direct at **www.royalmodel.com/en**

Squadron/Signal Books

David Doyle gave us the heads up on four new titles that he has authored for Squadron: **5902, K5(E) Railgun Detail in Action; 27023, FT-17/M1917 WWI Tanks Walk Around; 27024, M41 Walker Bulldog Walk Around** and **27025, M26 Dragon Wagon Walk Around.** It goes without saying that you should watch the book reviews section in future issues closely... Find out more right now at **www.squadron.com**

SKP

It's another healthy list of bits and pieces from SKP to brighten your day: **041, French Helmet WWII, €13.99; 105, M1114 Frag5 Detail set (Bronco), €23.90; 125, Czech ISAF Soldier Standing Guard Duty, Logar Province Summer 2008, €6.40; 127, Lenses and Taillights for Land Rover, €6.40; 132, Lenses and Tail Lights for T-72 (Tamiya), €6.40; 133, Lenses and Taillights for AAVP 7, €6.40; 134, Lenses and Tailights for SA-6 Gainful, €6.40; 140, Lenses and Taillights for Dodge WC Beep, €6.40; 141, Lenses and Tailights for Jeep, €6.40; 142, NSVT Heavy Machine Gun, €6.40; 143, Wheels for Gaz 66, €7.99; 145, Road wheels for GAZ 69, €7.99** and **148, Workable Tracks for Hetzer (Early), €13.49.** Among other things, we really like their lenses and taillight sets. We have to keep them away from Sarah though. She glues them to her toe nails. Weird.

Shopping for SKP is easy at their home page: **www.skpmodel.eu**

Tank from Russia

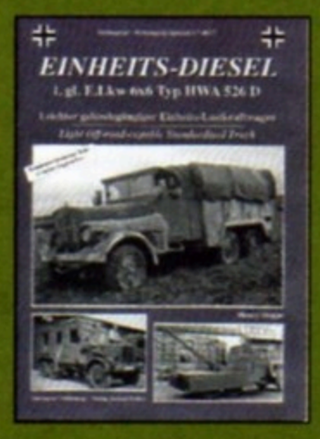
We're playing a little catch-up here with this figure line.

It's a healthy dose of their mainstay subjects, namely WWII Germans and Russians: **35118, German Panzer Grenadiers in Action, Kharkov Winter Spring 1943; 35119, War is Over German gun crew, Kursk Summer 1943; 35120, German Panzer Grenadiers in action II. Kharkov Winter Spring 1943; 35121, Soviet "SG-43" M.G. Crew Summer-Winter 1943-45; 35122, German MG Gunner in action. Kharkov Winter - Spring 1943; 35123, German Tank Officer Summer 1939-45; 35124, German Driver Summer 1941-45; 35125, Soviet Tanker Summer 1941-45; 35126, Wehrmacht Sniper Team, Summer 1943-1945; 35127, Soviet Machine Gunners (with 7.62mm MG DP-28), 1941-1945; 35128, Soviet Tanker, Summer 1943-1945; 35129, German Tank Crewmen (Painting Vehicles), Summer 1943-1945** and **35130, German Tank Crewman with Compressor (Painting Vehicles), Summer 1943-1945.** Excellent information on Tank can be found in the same place it's always been: **http://tank-model.ru/**

Tankograd

Which books did we like best from Tankograd lately? Well, that's hard to say really. So many great titles, so few bathroom breaks.

If you like cold war armor, **3017, MASSTER - MERDC - DUALTEX Multi-Tone Camouflage Schemes on Vehicles of the USAREUR in the Cold War, €14.95** will inspire you with a treasury of paint job inspiration.



4017, Einheits Diesel Truck, €14.95 is their latest Wehrmacht special reference work.

The M113 is a great subject, but we didn't have any idea your could get four books just out of the Bundeswehr versions: **5032, M113 in the Modern German Army - Part 1, €14.95; 5033, M113 in the Modern German Army – Part 2, €14.95; 5034, M113 in the Modern German Army - Part 3, €14.95** and **5035, M113 in the Modern German Army - Part 4, €14.95.** We loved the ice cream truck version in part 3. Just kidding.

U.S. Army Technical Manuals have been a real success story. They have re-prints now available of three releases: **6001, U.S. WW II M4, M4A1 Sherman, €9.90; 6002, U.S. WW II M4, M5, M6 High Speed Tractors, €9.90** and **6003, U.S. WW II DUKW-353, €9.90,** as well as two new ones: **6021, U.S. WW II M8/M20 Armored Cars, €9.90** and **6022, Caterpillar D7, €9.90.**

We're running out of room, so here are the other titles really quick. Don't blink: **7023, Yugoslav Armies Armour of the Yugoslav/Serbian Armies from 1945 to Today, €14.95; 7024, DANCON-ISAF, €14.95; Vehicles of the Danish ISAF Contingent in Afghanistan 2011, TBA; NVA 04, Military and Paramilitary Vehicles and Weapons of East Germany, €9.90** and **9017, Task Force HELMAND, €14.95.** That last tile is about the British Army in Afghanistan. Cool.

As usual, don't forget to check out their quarterly journal, **Militärfahrzeug**. It's all available at **www.tankograd.com**

Tank Workshop

Tank Workshop is another company that loves the Sherman. That makes us happy. They have been concentrating on 1:48 scale accessories lately.

Our hands-down favorite in this update has to be their M32 recovery vehicle conversions: **48018, M32B1 Conversion (Tamiya), $38.00** and **48019, M32B1 w/ Interior (Tamiya), $44.00.**

It doesn't stop there, though: **48036, Sherman Stamped Road Wheel and Idler Set, $9.00; 48037, Sherman Dished Road Wheel and Idler Set, $9.00** and **48202, Israeli M50 Turret Conversion (Early), $30.00** are all available right now. Jay from TWS has also gave us a peek at some other upcoming projects that will raise the roof: **48200, M51 Super Sherman Conversion, TBA; 48203 Chilean M60 Sherman Conversion, TBA; 48204 Israeli M50/51 Engine Deck, TBA** and **48205 Israeli Jerry cans in brackets, TBA.**

As far as 1:35 scale goes, they have a corrected turret for the M3 Stuart: **0104, M3A1 Corrected Turret (Academy and Italeri)** along with a few sets of new wheels: **0109, M1078 LMTV Wheels, $17.00; 0110, M-ATV MRAP Wheels (Panda), $14.00** and **0111, M1070 HETT Tractor Wheels, TBA.** It can all be found at **www.tankworkshop.com**

True Earth

True Earth is an Italian company that makes weathering products.

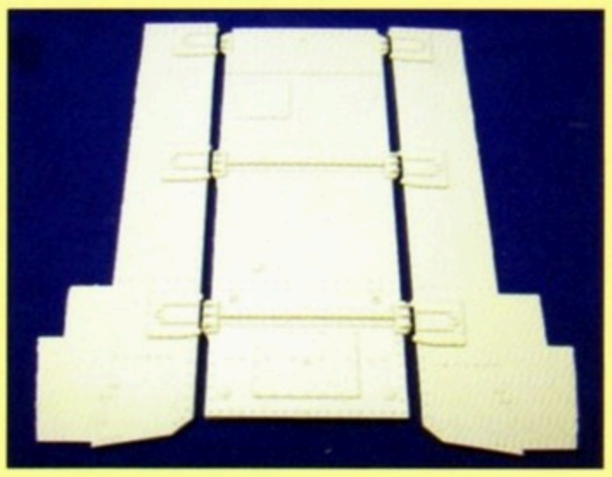
What makes these products unique is that they are based on a resin emulsion that has no solvents. You dilute it with water. It sounds like very good news for those of you who still swear by enamels such as Model Master and Humbrol. We received a couple of samples and will get back to you shortly on what we make of them.

Here are some of their effects that retail for €5.00 each: **All Paints Fading 1; All Paints Fading 2; General Ageing; Neutral Filter; Steel Plate Dark; Alu Effect; Mild Rust; Acid Filter; Spread Rust; Deep Rust Filter, Rust Bubbles Flowering, Grease and Soot; Red Oxide Primer** and **Dusty Road.**

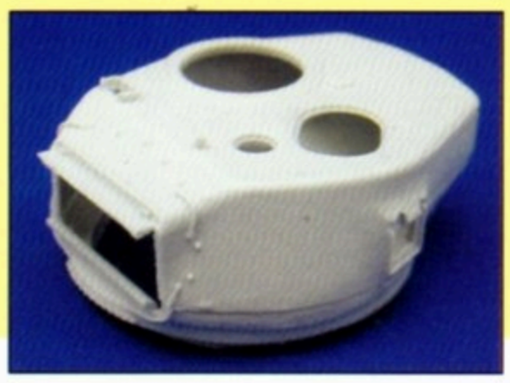
They also have a range of mud and dirt effects in paste form for getting your model really dirty. You can check those out along with tutorials on how to best utilize their products at **www.true-earth.com**

Tiger Models

A reformed and renewed Tiger Models is back in the news. These guys have sort of picked up where they left off with a ton of Sherman bits and pieces. It's too much to list here, so we're just going to give you a sweet taste with a look at the very latest:



AR-0327, Sherman 76mm Turret 7054366 (ASF), $22.50; AR-0328, Sherman 76mm Turret D82081, $15.00; AR-0329, Sherman 76mm Oval Loader's Hatch (Tasca), $5.00; AR-0330, M4 PSC Upper Hull, $20.00; AR-0332, M4A4 Upper Hull, $22.50; AR-0333, Sherman Riveted Lower Hull, $15.00; AR-0334, Sherman Early Welded Lower Hull, $15.00; AR-0335, Sherman Late Welded Lower Hull, $15.00 and **R-0336, U.S. Periscope Brush Guards, $5.00.**



Pat has been throwing Sherman masters at them for SOS related items and is still hiding a few things off in the corner. However, Karl Van Sweden is the real star of the show here and we have heard Karl and Pat whispering on the phone quite a bit lately. It's kind of annoying really, but we take it to mean that there are a lot more cool Sherman items in the pipeline.

Tiger's home on the web is **www.tigermodels.com**

Trumpeter

The Trumpeter release list really runs the gamut. We can't really pick a standout new item from them. It all looks good.

There is a big gaggle of 1:35 scale kits: **1512, M1129 Stryker Mortar Carrier, $47.95; 1530, Russian BMP3E Infantry Fighting Vehicle, $48.95; 1544, Russian BTR60PB Armored Personnel Carrier $53.95; 1584, German Sd.Kfz. 8 Gepanzerte 12-Ton Halftrack SRP $64.95; 1587, German Krupp/Ardelt 88mm Pak 43 Waffentrager Weapons Carrier $51.95; 1599, Japanese Type 87 Self Propelled Anti-Aircraft Gun $48.95; 2320, PLA Type 63 107mm Rocket Launcher and BJ212 Military Jeep, $33.95; 5517, Russian BTR-40 Armored Personnel Carrier, $53.95; 5527, German NBFZ (New Construction) Type 1 Heavy Tank, $67.95; 5530, German SdKfz.6 Type BN9 5-ton Halftrack, Pioneer Version $64.95; 5538, Russian ChTZ S65 Tractor, $46.95; 5541, Soviet IT-1 Missile Tank, $47.95** and **5569, JGSDF Type 96 WAPC B Armored Personnel Carrier $45.95**.

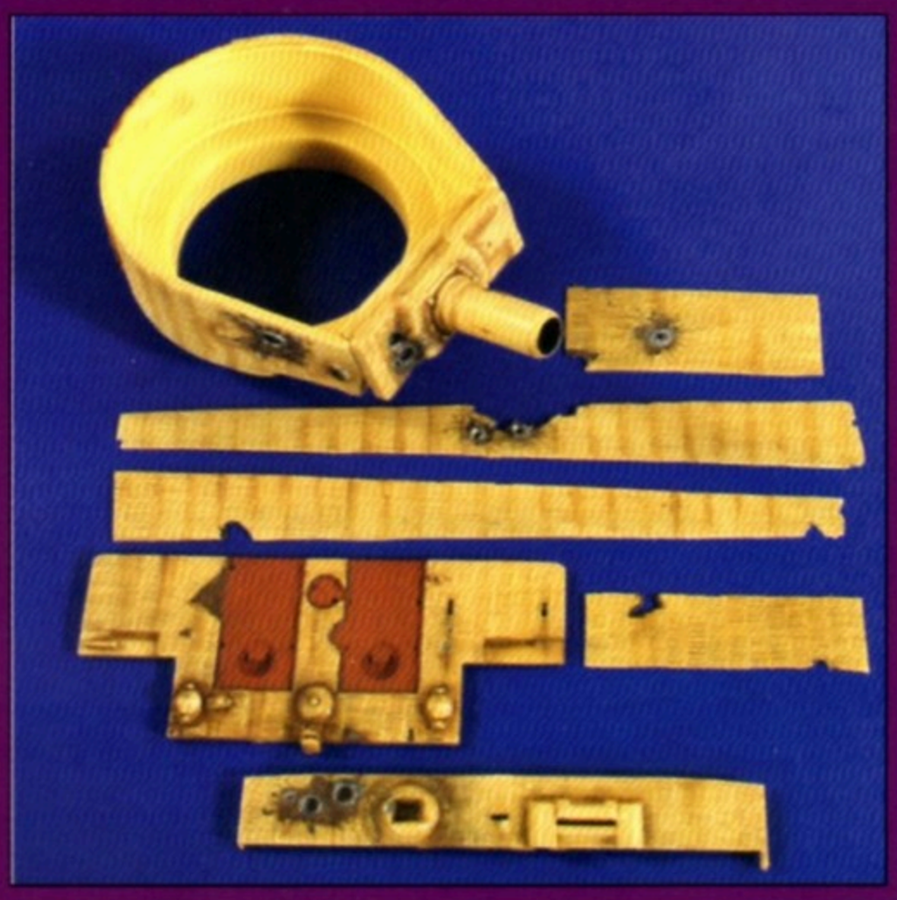
If you need tracks, check these out: **2047, PT76 Workable Track Link Set, $34.95; 2051, T64 Workable Track Link Set, $34.95** and **2058, E10 Workable Track Link Set, $34.95.**

How about a 1:3 scale M-16? Here's two new versions: **1907, 1/3 AR15/M16/M4 Family M16A2 Machine Gun $22.95** and **1908, 1/3 AR15/M16/M4 Family M4A1 Machine Gun, $22.95**.

Last but not least is **7106, 1/72 British Challenger I Main Battle Tank, NATO Version, TBA.** As far as 1:72 scale goes, Trumpeter likes to sneak these out right under our noses, so keep your eyes peeled the next time you're in the hobby shop. They have built a pretty healthy lineup. We get our updates on Trumpeter from the U.S. Importer, Stevens International (**www.stevenshobby.com**) Thanks, guys!

Verlinden

Verlinden continues to leave most others in the dust with a continuous onslaught of new releases: **2678, Seal Team, $16.95; 2679, RSO Pak 75mm Stowage-Ammo Crew, $32.95; 2680, Washing Machine WWII Era, $22.95; 2682, Panzernest, $32.95; 2683, 1:48 US WWII Template, $13.95; 2684, 1:48 German WWII Template, $13.95; 2685, German Tankers Road Map, $16.95; 2686, Panzerwerk Engine Hoist + Tiger I Engine, $34.95; 2687, M3 15mm Gun Carriage Ammo - Stowage - Crew, $34.95; 2688, Johnny on the Spot Iraq - Afghanistan, $32.95; 2689, 105mm NATO Tank Ammo, $14.95; 2690, GI's ETO WWII, $16.95; 2691, German WWII Emblems, $21.95; 2692, The Farmyard WWII Farmer, Horse & Children, $24.95; 2693, Panzerwerk Bridge Crane, $49.95; 2695, M16 Stowage - Crew - Ammo, $32.95; 2696, Dingo Stowage & Commander, $22.95; 2697, Point Blank Tiger I E + Zimmerit, $32.95; 2698, Point Blank Sherman Turret (76mm), $21.95; 2699, Point Blank German Steel MG Turret, $32.95; 2700, Jeep Stowage – Crew, $29.95; 2701, Panzergrenadiers MG Team (2 fig.), $16.95; 2703, 120mm British Commando WWII, $29.95; 2705, 1:35, Point Blank Panzernest, $24.95** and **2707, 1:35 Grille - Ammo - Stowage - Crew (Dragon), $32.95.**



Unfortunately, there really isn't enough room in the magazine to do these guys justice. We highly recommend you spend some time on their website at **www.verlindenonline.com**

WWP

WWP is back in the news with a bunch of new books. There's something for everyone in this list: **T001, Kriegslok BR 52 Train in Detail No.1; G017, Stryker Part 1 in detail (revised and extended reprint); G024, Japanese 4X4 LAV; G028, DANA ShKH vz.77 in Detail; R059, Bantam Jeeps in Detail; R060, SAS Panthers in Detail; R061, Flak 30 & 38 in Detail; R062, Pz.Kpfw. 35 (t) in Detail; R063, Humber Mk.IV & CMP Fox in detail; R064, BMW R12 in Detail; R065, M1 155mm Howitzer in Detail** and **R066, Soviet ML-20 Howitzer in Detail.** WWP books. Don't leave home without 'em. Their little nook on the web is at **www.wwpbooks.com**

Zvezda

Zvezda whips out the bad mamma jamma with **3573, T-90 Russian Main Battle Tank $44.95**. From what we have seen, this looks to be a pretty sharp rendition of Russia's newest main battle tank.

Some new renditions of old Soviet favorites were also in the news: **3507, Soviet Tank BT-5, $29.95; 3531, Su-100 Soviet Self-Propelled Gun $28.95** and **3608, KV-2, Soviet Heavy Tank $32.95**.

Two new figure sets and a motorcycle were also in our sights: **3618, Soviet Medical Troops WWII, $14.95; 3639, Soviet M-72 Motorcycle with Sidecar M-72 $19.95** and

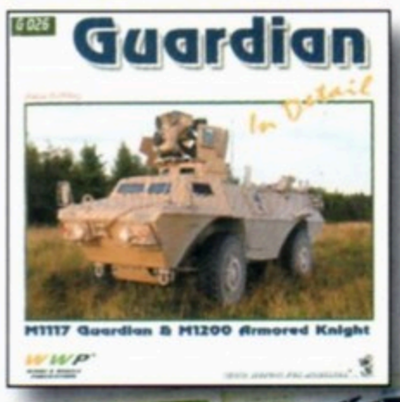
3643, Soviet Reconnaissance Team WWII, $10.95. You're guaranteed to see some of these in Mini Men.

Finally, the 1:72 scale stuff from them is: **6146, 1:72Soviet Naval Infantry 1941 – 1943, $4.95** and **6158, 1:72 German Heavy Anti Aircraft Gun Flak 36/37, $12.50.**

If you are into building up your small-scale army, these guys have a lot to offer. Stop by **www.zvezda.org.ru** to see what we mean. Thanks go out to Dragon USA (again) for keeping us updated. They are the main importer for Zvezda in the U.S.

Book Reviews

Guardian in Detail
By Ralph Zwilling
Wings & Wheels Publications
Soft Cover 92 Pages Full Color
ISBN 978-80-86416-88-5



SINCE BOTH HOBBY BOSS and Trumpeter now have kits out of the M1117 Guardian Armored Support Vehicle, we though you might want to take a look at this excellent reference work by WWP. Armored cars have come a long way from their rather crude origins in WWI. The M1117 is a direct descendant of the V100 armored car used in Vietnam. It's fast (over 60 mph), well protected (composite armor and NBC protection) and well armed (40mm grenade launcher and .50 cal in a powered turret). The U.S. Army found a need for increased protection for certain missions where the good old HUMMWV was found wanting after Mogadishu in 1993.

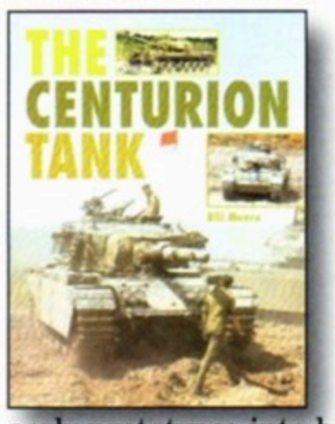
Mr. Zwilling has been doing a very nice job covering modern vehicles for WWP and this book is no exception. For starters, you get a good technical description not only of the M1117 vehicle itself, but there is also a gloss on the U.S. Army MP units that utilize it. The best thing about this book is the captioned photographs, both interior and exterior.

As if the coverage of the M1117 wasn't enough, the M1200 Armored Knight is also given equal treatment. The M1200 is a forward observer vehicle variant of the M1117 that also provides increased protection for troops who used to have to rely on the HUMMWV to do the job of locating and designating targets for precision munitions. A full vehicle description along with the exterior and interior photo coverage is given, just like for the M1117. There is a set of scale drawings at the very back for the M1200, too. Our thanks to Frantisek Koran at WWP (**www.wwpbooks.com**) for the review sample.

Men at Arms 464:
World War II Soviet Armed Forces (1)
By Dr. Nigel Thomas
Osprey Publishing
Soft Cover 48 Pages B&W with Color
ISBN 978-1-84908-400-0

MEN-AT-ARMS NUMBER 464 IS the first book in a new three-volume effort by Osprey to cover the uniforms and structure of the Soviet military in WWII. It concentrates on the early war period from 1939 to 1941. This little book covers a lot of territory very quickly. The text begins with the structure of Red Army from the High Command down to division level along with a short summary of military operations from 1939 to 1941. The majority of the text covers uniform details for all major services: the army, air force, navy, and state security (NKVD). The photos are captioned to provide details on the various uniforms. There are some that also provide portraits of famous personalities such as Zhukov and other generals. Of course, the most valuable parts of this book are the uniform plates that are in the middle of the book. Although Osprey has made an effort to cover Soviet WWII forces in other titles, it's nice to see a concise consolidation of this information. We await the other two titles in this sub-series with bated breath. Thanks to Sara at Osprey (**www.ospreypublishing.com**) for the review copy.

The Centurion Tank
By Bill Munro
The Crowood Press Ltd.
ISBN 1 86126 701 0



THE CENTURION TANK HAS HAD A life almost as long as the Sherman tank and has seen countless conflicts and endless modifications. This book examines the development and history of the Centurion tank and offers some interesting insights. For example, Britain wanted to send some early prototypes into battle during WWII. It was assumed that the Germans would capture some, but the British figured that any technology gleaned from the Centurion would be of no use to the Germans since most of their industrial base was too damaged to put it to use before the war ended. As it was, the war ended anyway and the Centurion was sent after VE day. Another interesting fact is that the United States was a major purchaser of the Centurion, buying them for MAP (Military Assistance Program) instead of their own M48's, to assist in building up a sufficient tank force in NATO. Much to the chagrin of the British Army, when it came time to up gun the Centurion to the 105mm the Americans bought most of the barrels first before the British could modify their own tanks.

The book is well illustrated not only with photographs, but also with wonderful period line drawings. They are many wonderful illustrations from the technical manual between the covers. Before the event of AutoCAD, drafting was almost an art as much as it was a form of technological illustration and these are a pleasure to look at.

Nuts & Bolts 26: 15cm sIG33/1
(Sf) auf HW 38(t) "Grille" (Sd.Kfz. 138/1)
Part 2: Ausf H
By Duske, Greenland, and Terlisten
Nuts & Bolts Publications
Soft Cover 144 Pages B&W with Color

THIS EDITION OF NUTS & BOLTS is a follow-up to N&B Volume 22 that we reviewed back in MMiR 47. This time around they cover the earlier version of this fun little German RV (Ausf. H versus the Ausf. M in N&B 26). It seems that they were finally able to get the photographs they wanted of a surviving Grille Ausf. H recovered from a river in 2000 (see Allied-Axis number 1). Of course, this is great news for detail freaks (and just freaks) everywhere.

This earlier version of the Grille was based on the Czech 38t Ausf. H chassis and had a rear engine design like the tank, as opposed to the mid-engine used on the Grille Ausf. M and Marder III Ausf. M Panzerjäger. The fighting compartment had a markedly different look in comparison to the later version. There were around 210 of the Ausf. H built in 1943.

As usual, the Nuts & Bolts team uncovers just about all the available information on the subject, from conception to unit allocation to combat experience. The text is accompanied by lots of period photos and full-color shots of the disassembled surviving vehicle along with line drawings and color plates. A couple of great 1:35 scale replicas are also presented for your modeling pleasure and edification.

If you take your Panzer research seriously, you will love this edition and all others in the Nuts & Bolts series. Thanks to Heiner F. Duske (**hfd.duske@t-online.de**) for the review copy

World War One 1002: Sturmtrüppen:
The Kaiser's Elite Stormtroopers
By Oliver Richter
Tankograd Publications
96 Pages B&W with Color
ISBN 978-3-936519-23-5

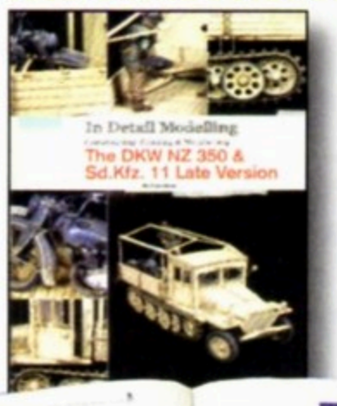
THE STURMTRÜPPEN WERE ELITE infantry formations in the German Army during WWI that were developed and deployed to break the trench warfare stalemate. They employed combined arms tactics using pioneer equipment, hand grenades, flame throwers, machine guns and light artillery to create gaps in trench lines by neutralizing strong points and then leaving remaining resistance to be mopped up by regular infantry.

The first chapter in this book contains the bulk of the textual information and details the history of the development and deployment of the Sturmtrüppen. Chapters on the Marine storm trooper battalion and storm trooper training follow. The rest of the book is devoted to equipment and weapons with separate chapters for each of the

following: uniforms and equipment, flame throwers, machine guns, mine launchers (mortars), assault accompanying gun (infantry guns), and support weapons (heavy artillery, tanks and aircraft).

The last chapter is the nicest for figure modelers as it features a full color profile of Sturmtrüppen uniforms and equipment. Due to the high quantity of rare photos (165 black and white and 48 color), we can't recommend this release from Tankograd highly enough for anyone with the least bit of interest in WWI. Get yours today. Thanks to Jochen Vollert at Tankograd (www.tankograd) for this and all of the other review copies we receive.

In Detail Modelling Constructing, Painting & Weathering
The DKW NZ 350 & Sd. Kfz.11 Late Version
By Mario Eens
Add-on Publishing
Soft Cover 130 Pages Full Color
ISBN 978-94-91087-00-4



AT FIRST GLANCE, THE PROJECT covered in this book looks rather mundane. It's a plain old German Sd.Kfz.11 with a single figure and a motorcycle in the back, right? Well, looks are deceiving in this case. Mario Eens uses this single project to profile modeling methods and techniques that really set his models apart. The book reads like a super article. The subject is given a step-by step profile from start to finish that covers advanced construction and detailing techniques like photo-etch and using real wood to reconstruct the cargo bed.

Mr. Eens goes into depth on painting and weathering techniques too on the half-track, motorcycle and the figure. The weathering techniques used on the Sd. Kfz. 11 were particularly interesting. You can learn a lot from this book, even if you are a fairly advanced modeler. Special thanks go out to Nico at Add-On Publishing (**www.addonpublishing.com**) for the review copy.

Panzerwrecks 12
By Lee Archer and William Auerbach
Published by Panzerwrecks
96 Pages B&W plus Color!
ISBN 978-098418204-6

IN THIS LATEST ADDITION to the Panzerwrecks series, the authors have departed from the battle front theme (Eastern Front, Italy, Normandy). It appears that most of the subjects are from the Western Front. Things start off really well with "Self-Destruct: Story of a Jagdtiger." The photo essay contains nice detail shots, as well as an overall shot that gives you a good idea of the paint scheme. A mix of photos follows that includes a few very late Panthers, Jagdpanthers and some SPGs on chassis of French origin before jumping into "Sarge" Bealko Shoots a Tiger II."

This essay covers a Tiger II from SS Panzer Abteiliung 101 lost in September 1944. After two quick photos of Panzer II Ausf. B chassis, there's another mix with the late model StuG III as the star. Old Timers at Schmalnau is the next highlight chapter with some elderly Panzer IIIs and IVs in hodgepodge paint schemes. Some nice shots of the Sd.Kfz. 8 12-ton halftrack follow along with a collage from a vehicle collection point in Austria. An M8 Greyhound re-armed with the triple-barreled MG151 gets two photos. This is followed by some German-operated French R-35 wrecks.

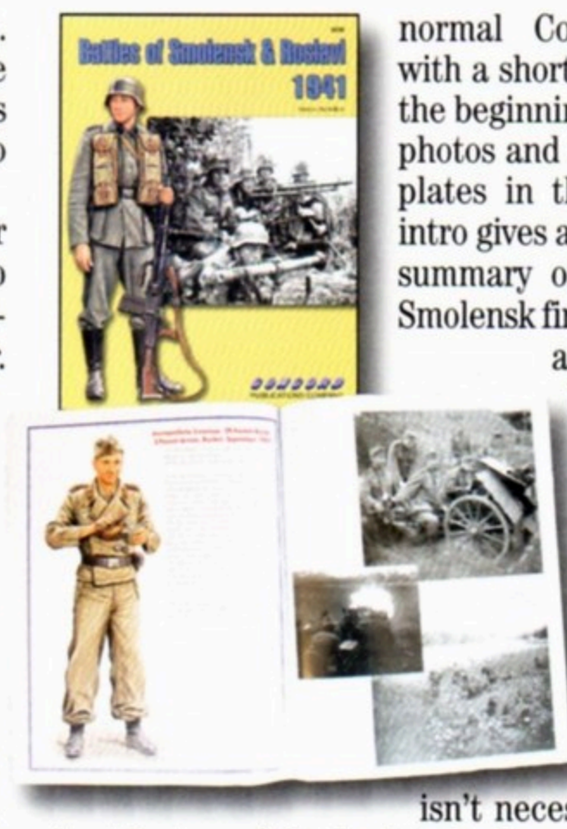
It's all about the Panther for the next few pages with "Disc Panther at Parroy." The real highlight of this book has to be the "Panzer IV/70 (V) Inside and Out," because of the interior views provided. After another miscellaneous assortment of vehicles, there is a short feature on the famous "Octopus" Tiger II including a color shot on the inside back cover to finish things off. As with any Panzerwrecks book, this is a delightful way to get inspiration for your German WWII armor. Thanks to Bill Auerbach (www.panzerwrecks.com) for the review copy.

Weathering in 1 Hour
By Mig Jimenez
Produced by AK Interactive
DVD AK036

A LOT OF MODELERS GET STUCK with the weathering process. This new DVD by master modeler Miguel Jimenez really throws down the gauntlet when it comes to getting the lead out, clearly showing a weathering sequence that is very efficient. The video itself is shot in real time. It's almost like an aerobics program for modeling that shows you how to wrap things up with your project quickly and efficiently. There is no spoken narrative, but each stage of the process is announced by subtitles. Each product used is shown clearly along with the method of application. The video begins with a 1:35 scale Sd.Kfz. 222 model that is already painted. The application of washes, chipping, streaking, oil paint highlights, rust, mud, fuel stains and metallics are all illustrated. Perhaps the most important thing established here is a sequence that you can copy and then develop as your own finishing technique.

A nice little booklet of color plates for the Sd.Kfz. 222 is also provided. If you are scratching your head about how to get the weathering process down, this video is definitely for you.

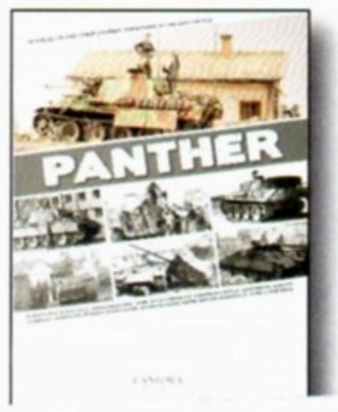
Battles of Smolensk and Roslavl 1941
By Hans Sedler
Concord Publishing
52 Pages B&W with Color
ISBN 962-361-173-0



THE BATTLE OF SMOLENSK WAS A HUGE VICTORY FOR THE Germans in the summer of 1941, where they bagged close to 300,000 Russian prisoners. However, it was a foreshadowing of things to come, as the Red Army did make an effort to put up a stiff defense. Concord dishes out a healthy serving of Barbarossa flavor with this title by Hans Seidler. The book follows the normal Concord formula with a short introduction at the beginning, lots of period photos and some nice color plates in the middle. The intro gives a short but sweet summary of the Battle of Smolensk first. This includes a list of German Units involved.

The last part of the text is on the smaller engagement at Roslavl. As far as the photos, this book is pretty thin on tanks. This isn't necessarily bad. The best feature of this book is the large amount of photos depicting crew served weapons. Heavy machine guns, mortars, and various artillery pieces all get pretty good exposure here. We found this especially relevant given the proliferation of German artillery kits in recent years. A large portion of the photos show infantry types in action and are great fodder for diorama builders. The color plates in the middle of the book depict one SS infantryman with a Czech MG 30, two Wehrmacht infantrymen and a Sturmgeschütz crewman. If you are interested in the Russian front, you'll want to add this one to your stack. Thanks to Dragon U.S.A (**www.dragonusaonline.com**) for the review copy.

Panther
Canfora Grafisk Form & Forlag
144 Pages B&W with Color
ISBN 978-91976773-5-6



THE PANTHER RANKS RIGHT UP there with the Tiger when it comes to all-time favorite armor modeling subjects, so it's no surprise to see a book like this. Basically, this latest effort from the folks that brought us The Nordic Edge is a showcase of what some of the best modeling talents in the world have done with their Panther kits. All of the subjects are based on 1:35 scale Dragon kits. All are simply beautiful in their execution.

Seven out of nine tanks are presented in a diorama setting with well-done scenery and all have at least one figure, so each project is a complete package. There is a heavy emphasis on the Panther G. Six out of nine features are on this version. There are two Panther A models and a Panther D thrown in for good measure. Some of the modelers also include very interesting historical background articles on their subjects. Like the Nordic Edge, these books are not really in-depth on how-to and this volume serves more as an inspiration to show what is possible with today's kits. Panzerphiles everywhere will definitely want to freak on this one. Thanks to the publisher for the review copy. Pick yours up today at **www.canfora.se**

Cavalry Scouts

A beginner's guide to the M1127 Stryker Reconnaissance Vehicle.

1

The 17.95-ton M1127 Stryker Reconnaissance Vehicle (RV) is designed to provide an effective platform for the Long Range Advanced Scout Surveillance System (LRAS3) and enable Reconnaissance, Surveillance and Target Acquisition (RSTA) Squadron and battalion scouts to perform surveillance operations in support of the brigade. Each Stryker Brigade Combat Team (SBCT) fields a Scout Platoon with four M1127 Stryker RV in each of the three Infantry Battalions. Furthermore each SBCT has its organic RSTA Squadron consisting of a Headquarters and Headquarters Troop, three Reconnaissance Troops and a Surveillance and Target Acquisition Troops. The Reconnaissance Troops have a Troop Headquarters, Mortar Section and three Recon Platoons each with four M1127 Stryker RV.

In contrast to the M1126 Stryker Infantry Carrier Vehicle, the RV version has no Kongsberg M151E2 Remote Weapon Station. The vehicle is either equipped with a cal.50 M2 HB machine gun or a 40mm Mk19 MOD3 automatic grenade launcher mounted on a power assisted commander's cupola. The cal.50 M2 HB is considered the default weapon. The Long Range Advanced Scout Surveillance System (LRAS3), produced by Raytheon, is a long-range multi-sensor system providing real-time ability to detect, recognize, identify and geo-locate distant targets. The sensor, mounted on the commander's cupola next to the weapon mount, provides precise far-target location by incorporating an advanced second generation Forward-Looking Infrared (FLIR) sensor, a Global Positioning System (GPS) interferometer, an eye-safe laser rangefinder and a Day TV (DTV) camera. Both the FLIR and the DTV camera have two fields of view; wide and narrow. LRAS3 can establish a target location at 10 kilometers with an estimated CEP of 60 meters. The laser rangefinder is capable of measuring range with a five-meter accuracy. The low silhouette makes the vehicle a difficult target to detect and engage.

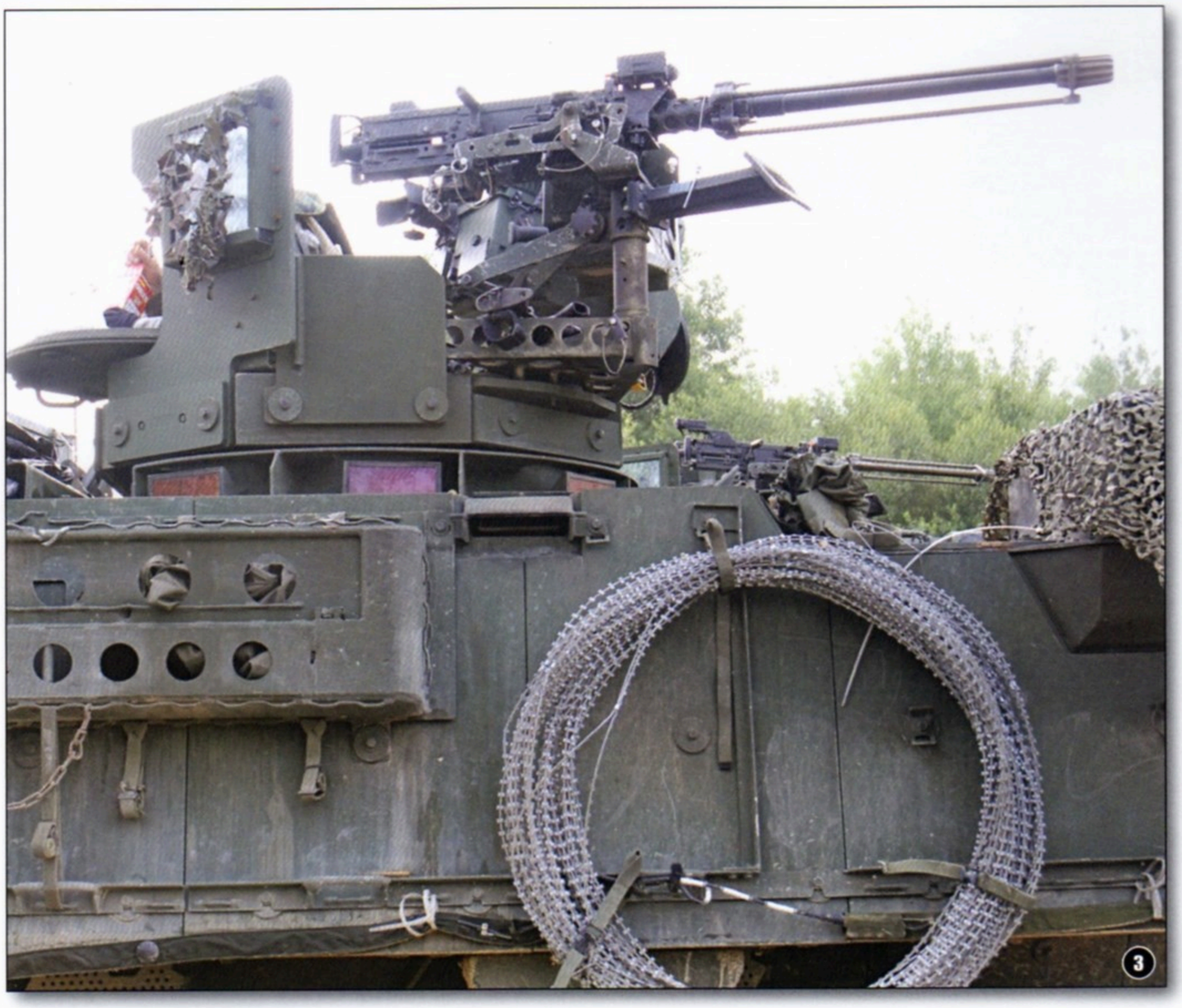
Most of the sophisticated mission related surveillance equipment is mounted in the rear troop compartment. The AN/VSQ-2 (V) 1 EPLRS, AN/UYK-128 FBCB2, AN/VRC-91F ASIP radio, AN/VRC-92F ASIP radio and an AN/PRC-150(C) HF radio are all installed in the C4ISR rack behind the commander's station. The right side of the troop compartment behind the benches is used to store the M22 ACADA, AN/PSQ-3 (V) 3 Counter Intelligence/Human Intelligence Automated Tool Set (CHATS), Javelin ATGM with Command Launch Unit (CLU), AN/CYZ-10 Data Transfer Device, several MREs, two AN/PAS-14 Lightweight Weapon Sights, Lightweight Video Reconnaissance System (LVRS), AN/VDR-2 Radiac set, AN/UDR-13 Radiac set and spare barrels for the M240B machine gun. The CHATS hardware and software suite is an information management system specially designed for Army Counterintelligence and Human Intelligence (CI/HUMINT) teams operating in the field. It's accredited for secret level operation and uses commercial software applications for most common tasks while using government developed software for CI/HUMINT tasks. CHATS provides team leaders with the capability to collect, process and disseminate information through investigations, operations, collections, interrogations, debriefings and document exploitation. CHATS is composed of a laptop computer complimented with scanner, digital camera, color printer, Precision Lightweight Global Positioning System Receiver (PLGR), Secure Telephone Unit (STU) 1910 for secure data communications, external Zip drive, Special Purpose-Tactical Communications Interface Module (SP-TCIM), and a "Toby" cable used to connect CHATS to the Single Channel Ground and Airborne Radio System (SINCGARS). The LVRS consists of a man-portable remote station used by surveillance, reconnaissance or scout teams to capture, compress and transmit still frame images over military communications back to a base station at higher echelon. Base stations receive still frame images from their remote stations and can exchange them with other base stations. The storage box inside the right troop seat bench holds 7x50 binoculars, a Case Medical Instrument CLS bag, flashlights, another AN/PSN-11 PLGR, some MREs and a TA-1PT telephone set. Two M136 AT-4 light anti-tank weapons, the M11 Decontamination Apparatus, MRE heater and MREs, four night vision goggles, a portable AN/PRC-119F ASIP radio, LRAS3 tripod and batteries, battery charger, AN/PAS-13 Lightweight Thermal Weapon Sight and the AN/PAS-17 Lightweight Weapon Sight for Squad/Platoon Surveillance are stored on the left side of the troop compartment. The AN/PAS-13 uses forward-looking infrared (FLIR) technology and provides a standard video output for training, image transfer or remote viewing. The AN/PAS-13 can be used to see in total darkness, in adverse weather conditions, and through battlefield smoke and dust. Furthermore, it provides interchangeable telescopes for quick adaptation to any mission.

—Ralph Zwilling

Excerpted with permission of the author from "Stryker in detail, U.S. Stryker Interim Armored Vehicle Family Part One," Stryker IAV in detail, Present Vehicle Line No. 17, Wings & Wheels Publications, 2007. ISBN 978-80-86416-61-5.

2

These photos show M1127 Stryker Reconnaissance Vehicles of the 2nd Squadron, 2nd Stryker Cavalry Regiment at Forward Operating Base Cougar during Field Training Exercise Cougar Steel held at the Grafenwöhr Training Area in Germany. The Reconnaissance Platoon, with four M1127 Stryker RVs, is organic to the Headquarters and Headquarters Troop. **1-4.** *In contrast to the M1126 Stryker ICV, the RV version has no M151 Remote Weapon Station. The vehicle is either equipped with a cal.50 M2 HB machine gun or a 40mm Mk19 MOD3 automatic grenade launcher mounted on a power assisted commander's cupola. Note the long Range Advanced Scout Surveillance System (IRAS3) located next to the cal.50 M2 HB machine gun and the large wire cutter.*



3

This M1127 Stryker Reconnaissance Vehicle drove off a gravel path in the woods during a training exercise and was recovered by another Stryker using the Rotzler Treibmatic TR 080 hydraulic self-recovery winch.

The reliable, belt fed, recoil operated, air cooled cal.50 M2 HB machine gun is capable of single shot and automatic fire from the closed-bolt position. The muzzle velocity is approximately 930m/s. Note the Gunners Protection Kit (GPK) attached in front of the machine gun. The GPK was first seen on HMMWVs used in Iraq or Afghanistan.

The long Range Advanced Scout Surveillance System (lRAS3) is a long-range, multi-sensor system providing real-time ability to detect, recognize, identify and geo-locate distant targets. The sensor, mounted on the commander's cupola next to the weapon mount, provides precise for-target location by incorporating an advanced second generation Forward looking Infrared sensor, a Global Positioning System interferometer, an eye-safe laser rangefinder and a Day TV camera. The laser rangefinder is capable of measuring range with a five-meter accuracy and lRAS3 can establish a target location at 10 kilometers with an estimated CEP of 60 meters.

View of the rear troop compartment of a M1127 Stryker Reconnaissance Vehicle. The left seat bench is smaller than that in a M 1126 Stryker ICV as the crew only consists of the vehicle commander, driver, squad leader and four squad members.

This photo shows a portion of the Stryker's state-of-the-art C4ISR system located in a rack behind the commander's station. On the left side of the rack you can see the AN/VSQ-2 0f) 1 Enhanced Position Location Reporting System (EPLRS), on top two Advanced SINCGARS Improvement Program (ASIP) radios, (AN/VRC-88F and AN/VRC- 91 F) in the middle and the FBCB2 CPU below. On the right side of the rack the communications power distribution unit is on top, AN/PRC-150(C) HF radio in the middle and the embedded training module below.

The M1127 Stryker RV commander's and squad leader's station in detail. Note the squad leader's Video Display Terminal located left of the commander's FBCB monitor. The commander has a four-point seat belt produced by AMSafe Incorporated.

Jungle Rot

The Tamiya Komatsu G40

Tracing it's beginnings to 1902, the Tacheuchi Mining Company began operating the Yusenji copper mine about eight kilometers from Komatsu City. In May 1921, it became the Komatsu Equipment Company.

In 1920, the mine ran into financial difficulties and ceased operations. At this time, the head of the mining company, Meitaro Tacheuchi, got together a group of investors to form Komatsu Manufacturing Company Ltd. Earlier, in 1911, an iron casting works had been built near Komatsu City and named Komatsu Ironworks. This ironworks was the foundation for Komatsu Manufacturing's iron and steel casting. This same group was responsible for the manufacture of the first domestically produced Japanese vehicle, the DAT, which eventually became Datsun.

Komatsu began crawler tractor production in 1932 with a copy of the Caterpillar 2-Ton crawler designated G25. In 1935, they released a copy of the Best 30, designated the G40.

In May 1937, the G40 was put up against a range of other tractors from other producers around the world in trials in Manchuria. The G40 out-performed all competitors but its gasoline engine was slightly less economical than the Cat RD4, which was its main competition. From these trials it was decided by the Japanese government that all agricultural tractors for Manchuria were to be diesel-fuelled. Komatsu began working on producing its own high-speed diesel engines. Their first diesel powered crawler was the G35, apparently released the same year.

Some years ago, what is believed to be the only surviving G35 was found on a farm near Griffith, New South Wales, Australia in working condition. It was shipped back to Japan where it now resides in a display of tractors at a Komatsu factory.

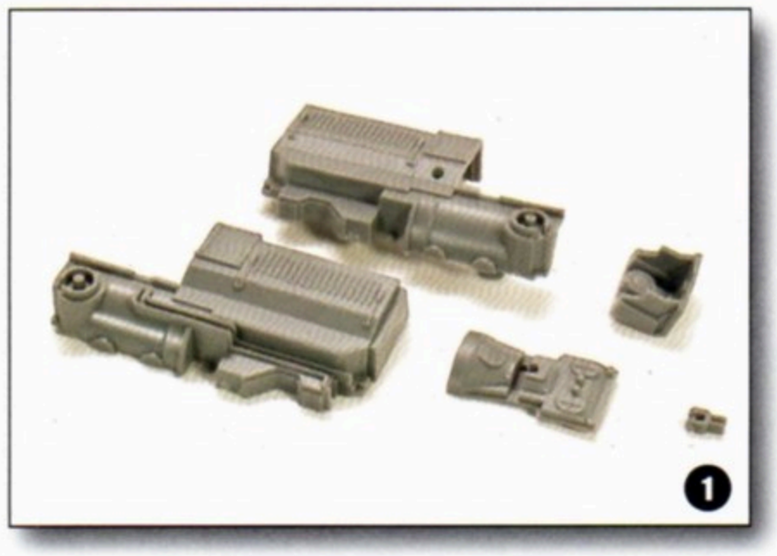
The kid in me

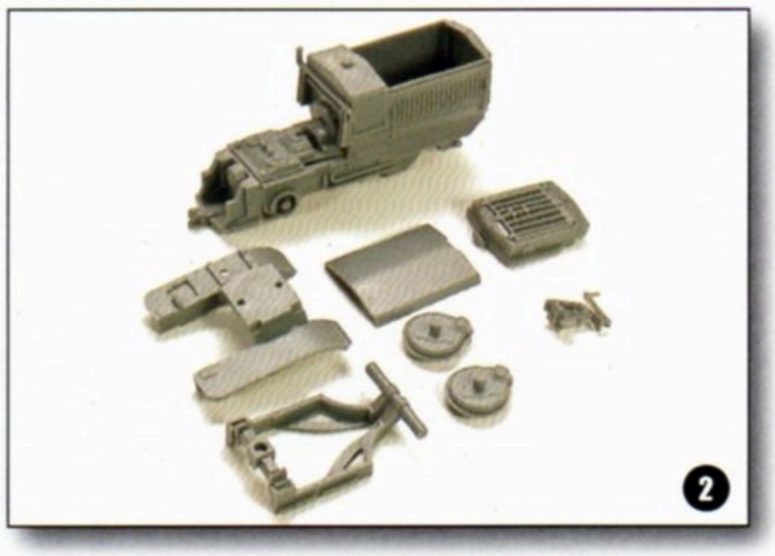
Rarely does a new release announcement catch my attention, as did Tamiya's recent Komatsu G40 Bulldozer. Perhaps it is just the little kid in me, but I am still fascinated by watching heavy equipment operate. And with all of these contemporary examples in use, references for weathering are not hard to find.

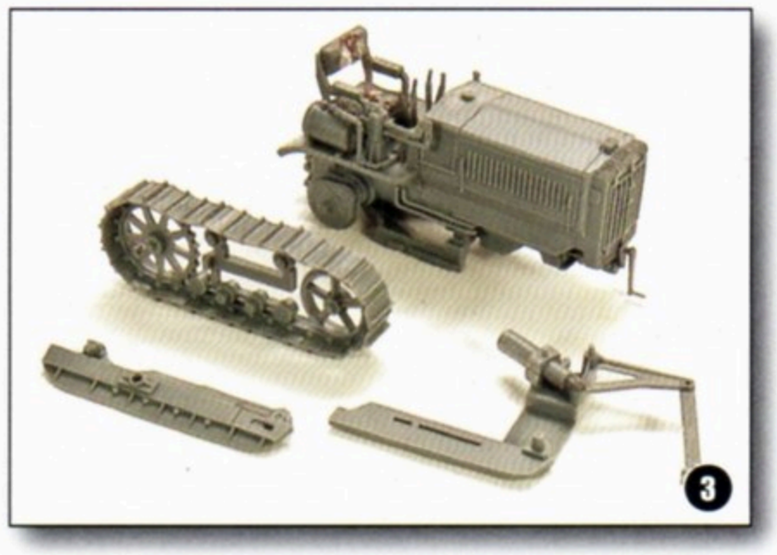
When opening the box the little jewel inside greets me—and I mean little. The built tractor measures approximately 2.5 inches long by 1.5 inches in height and a quick review of the parts shows a high level of molding detail. The seven step (yep, only seven steps) instructions are in the familiar Tamiya format using exploded diagrams to show parts placement. Also included in the box is a limited decal sheet, a metal IJN emblem, and a supplemental sheet showing the dozer in period photographs.

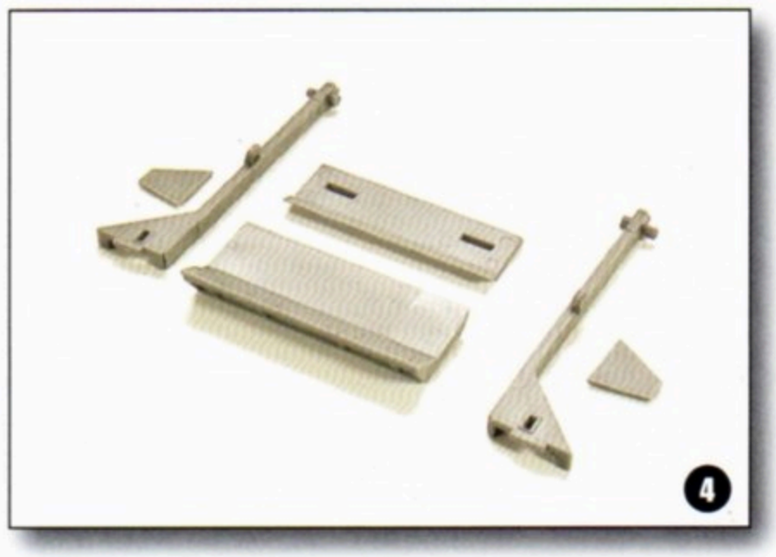
As one would expect, the fit of this kit is flawless though out, with little flash or seams to clean from the parts. Construction begins with the main chassis and engine hood and quickly moves to the underside where the suspension supports are added. The wheels and tracks are provided as a single piece, which look great and make assembly a breeze. The final step is the blade. The blade is a multi-part assembly that truly captures the feeling of weight of the real thing. The blade attaches to the dozer body along the lower sides and front arms with simple pins and slots. For ease of painting I would suggest leaving the blade separate for attachment once painting is completed.

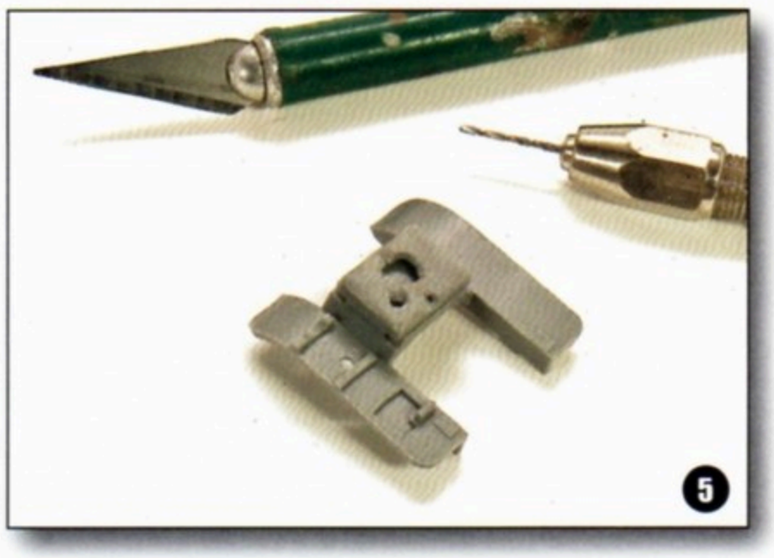
Having planned to make this little dozer a forgotten relic of the long ago island campaigns I knew that I would need to perform a few alterations to make scene convincing. Thinking that the hydraulic hoses would probably have decayed and broken loose from their fittings, I cut off the existing plastic hoses from the kit parts. These are replaced with thin gauge solder and formed to hang loosely along the sides of the tractor. The driver seat will also need (lack of) attention to show similar aging and wear. Initially I had thought to totally replace the existing seat with a newly (de)constructed frame made from wire and scrap. Instead, being the somewhat lazy modeler that I am, I decide to try altering the kit part before scratching an entire new seat. I choose to take my pin drill and X-acto knife to carve

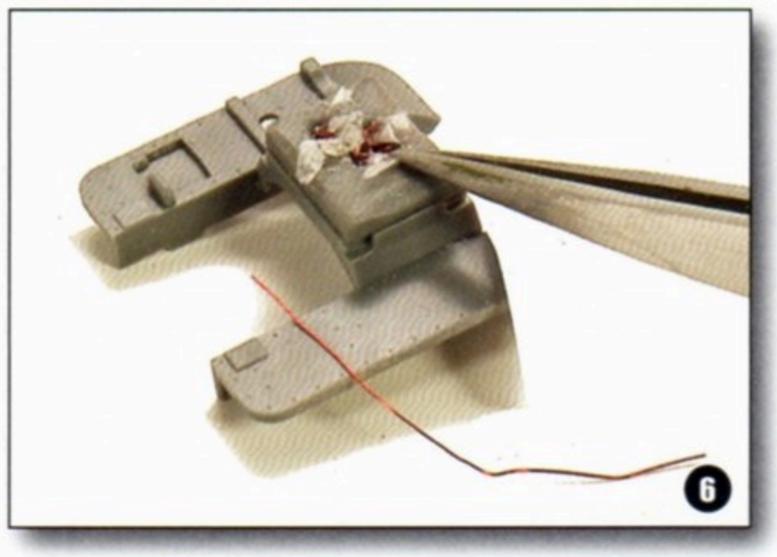


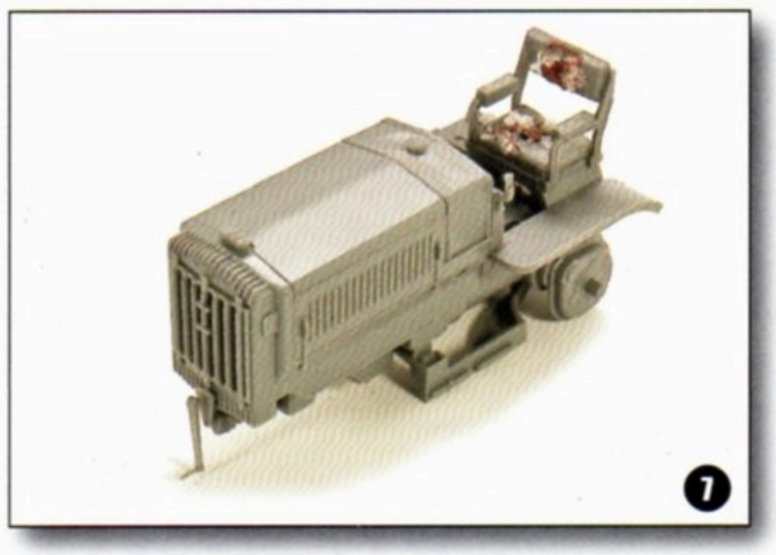


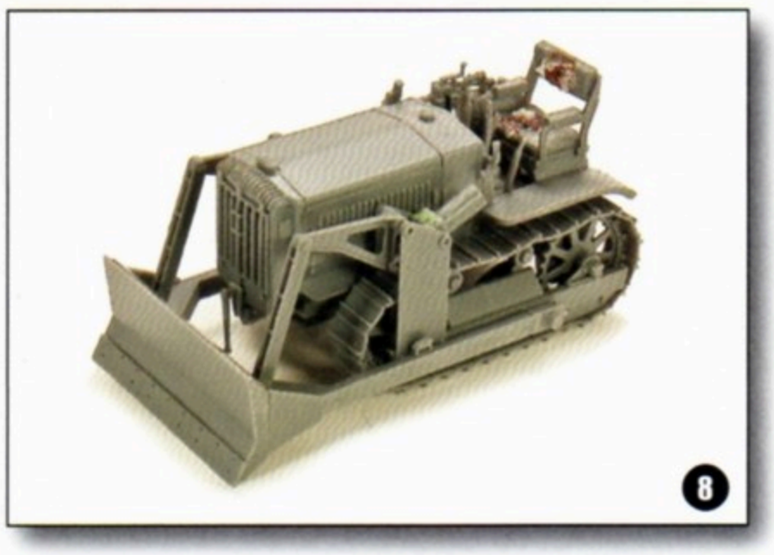


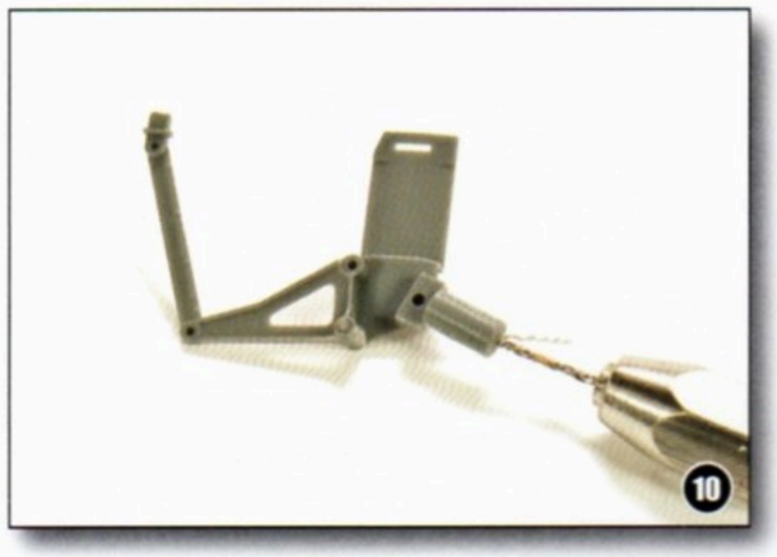












1, 2. *Yep, it's little. The built tractor measures approximately 2.5 inches long by 1.5 inches in height (6.3cm x 3.8cm).* ***3.*** *The wheels and tracks are provided as a single piece, which look great and make assembly a breeze.* ***4.*** *The blade is a multi-part assembly that truly captures the feeling of weight of the real thing.* ***5-8.*** *To alter the seat I use my pin drill and X-acto knife to carve and drill out varying sized holes and blemishes. To replicate the cushion springs I wind thin gauge wire to shape and glue them into the holes and blemishes. Around the edges I glue small patches of tissue paper to replicate the torn fabric.* ***9, 10.*** *I cut off the existing plastic hoses from the kit parts. These are later replaced with thin gauge solder and formed to hang loosely along the sides of the tractor.* ***11.*** *I begin the finish by giving the entire model an underlying color layer of Tamiya NATO Black.* ***12.*** *Over this I spray my rust layer of colors of Tamiya Hull Red, Red Brown, Deck Tan, and Clear Red.*

and drill out varying sized holes and blemishes. To replicate the cushion springs I wind thin gauge wire to shape and glue them into the holes and blemishes. Around the edges I glue small patches of tissue paper to replicate the torn fabric. It turns out the solution is rather simple and I believe effectively replicates the look of a seat left out to the elements.

Layers and the new math

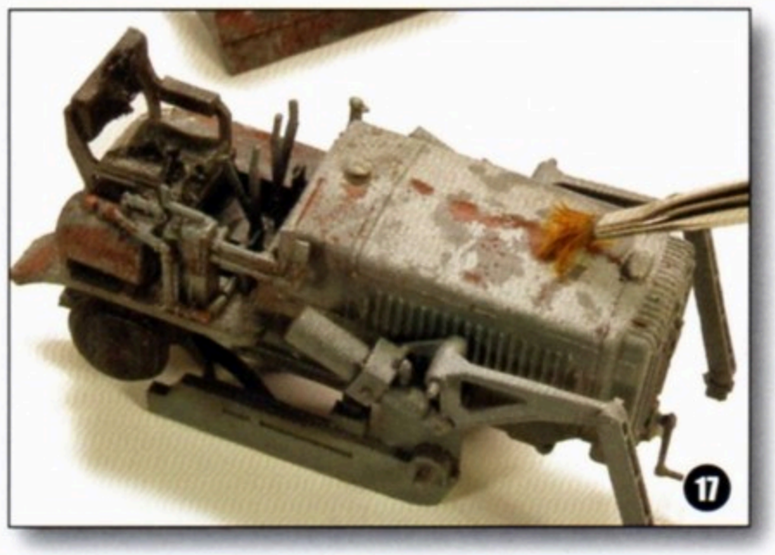
Layers: this is our word for the day. It turns out that painting a rusted relic involves quite a lot of planning and forethought—more that I had anticipated. In my opinion, an important component in this type of finish is the element of randomness that occurs from natural conditions. Looking at any example of heavily weathered equipment reveals a rainbow of colors and textures.

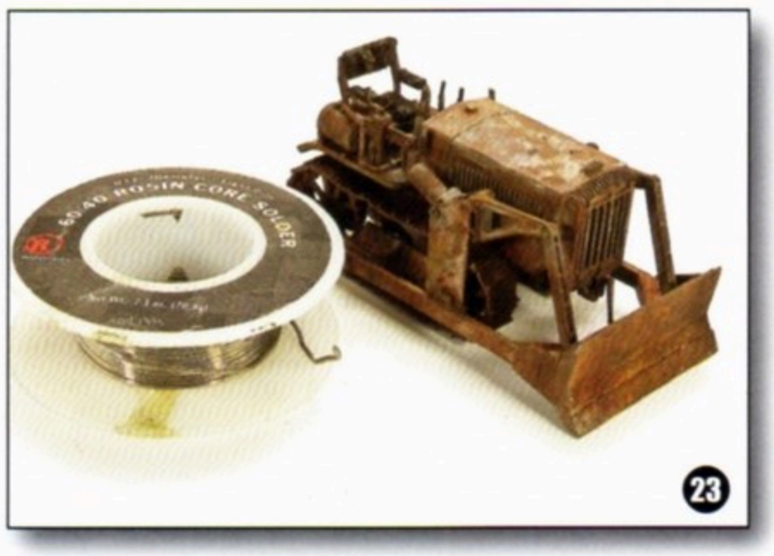
I begin by giving the entire model an underlying color layer of Tamiya NATO Black to produce the deepest shadows. Over this I spray my rust layer of colors of Tamiya Hull Red, Red Brown, Deck Tan, and Clear Red. Although ultimately this layer of color would be painted over, scrubbed, and generally abused during the weathering process, I believe that even at this early stage it is important to add visual interest. From the photos you might notice that the color coverage is not uniform and that there are color variations over the surfaces. I then protect this layer with a light misting of Johnson's Future acrylic floor polish.

Let's count the layers, shall we? Layer three is comprised of small dabs of MIG Productions Liquid Mask applied with a Scotch Brite pad to create small, deep "rusty" nicks on the surface. Layer four is a visit to the beauty shop for a hairspray makeover. Next, I apply the vehicle's grey colors using Tamiya IJN Grey mixed with Flat White and Medium Blue. Again, these colors are applied with varying colors and consistency.

Addition and subtraction

The principal behind using hairspray as an





underlying layer is that when water is applied over the surface, certain areas of the hairspray will dissolve and lift off the overlying paint. A little scrubbing with a stiff brush is all that is needed to promote this effect. I try to "enhance" this effect by combining it with the initial liquid masking layer. From the photos Layer five minus two?

At this point I am pleased with the resulting appearance, but there is more to do. I am planning on using artist's oils and pigments in the latter stages, but I also want to preserve some of the more vibrant patches I have right now of the vehicle's grey colors. To protect these I once again use MIG Productions Liquid Mask for a quick protective layer. Layer equals (five minus two) plus one.

I hope that you see the difference in exposed layers from where the hairspray alone has removed paint layers and those areas where hairspray and liquid mask combined to create different effects.

From this point forward layer counting becomes very complex, as an almost simultaneous use of MIG Productions pigments and 502 Abteilung artist's oils are used to add visual interest and complexity to the surfaces. One technique that I try for the first time is to lightly dab a color of artist's oils onto the surface—Shadow Brown, German Ochre, Light Rust, and Faded German Yellow—and then quickly dab dried pigment colors onto the wet oils. These ingredients mix and dry to very convincing patinas. I also employ my usual approaches to weathering of using artist's oils to help define certain shapes and contours with thin color applications. Shadows are

defined using pin washes. In addition to dabbing the pigments onto the wet artist's oils I also use my typical method of first dissolving them in turpentine and applying them with a small brush. I like this method because it allows for greater control for placing the pigments exactly where intended. Layers—I ran out of fingers to count on!!

***13.** I then protect this layer with a light misting of Johnson's Future acrylic floor polish.* **14.** *The next layer is comprised of small dabs of MIG Productions Liquid Mask applied with a Scotch Brite pad.* **15.** *Layer four is a visit to the beauty shop for a hairspray makeover.* **16.** *I apply the vehicle's grey colors using Tamiya IJN Grey mixed with Flat White and Medium Blue.* **17, 18.** *I hope that you see the difference in exposed layers from where the hairspray alone has removed paint layers and those areas where hairspray and liquid mask combined to create different effects.* **19.** *To preserve some of the more vibrant patches of grey, I once again use MIG Productions Liquid Mask for a quick protective layer.* **20-22.** *An almost simultaneous use of MIG Productions pigments and 502 Abteilung artist's oils are used to add visual interest and complexity to the surfaces.* **23.** *The solder is now added to represent the long neglected hydraulic lines.* **24.** *In addition to dabbing the pigments onto the wet artist's oils I also use my typical method of first dissolving them in turpentine and applying them with a small brush.* **25.** *I make a simple 4"x4" cube to be used for the base platform. Over this I apply a rough layer of Apoxie Sculpt to make the basic ground contours.* **26.** *Once the putty dries, I build up the surfaces using Plaster of Paris. The majority of the vegetation is dried moss found at the local crafts store, Silfor grass, Woodland Scenes, and Kamizukuri laser cut paper leaves.*

Base line

I am a big believer that even a simple scenic base is an important element in the telling of the story. For this story I want to show the passage of time as the jungle slowly encroaches and overtakes the forgotten dozer. To begin I make a simple 4"x4" cube to be used for the base platform. Over this I apply a rough layer of Apoxie Sculpt to make the basic ground contours. This includes pressing the dozer into the putty to make sure that it is really set into the scene. Once the putty dries, I build up the surfaces using Plaster of Paris and then paint the groundwork a base color of Tamiya Flat Earth. The majority of the vegetation is dried moss found at the local crafts store that I color by submersion in thinned acrylic paint baths of greens and yellows. Other plant life comes from Silfor grass, Woodland Scenes, and few of the Kamizukuri laser cut paper leaves. Once the model has been placed on the scene, I make the last weathering adjustments by adding some the effects of mossy build-up by dabbing a little bit of MIG Productions Allied Green and Gulf War Sand into certain recesses and corners of the dozer.

The final layer

This is one of those projects that really brought a smile to my face. As I mentioned earlier I am a big fan of this type of subject matter and with construction comprising only seven steps, this kit makes for a perfect afternoon project; leaving plenty of time and energy to be devoted to the painting and finishing steps. I need to give kudos to fellow MMiR contributor Mike Rinaldi who's painting techniques articles over past issues have been very helpful to me in opening up and exploring some of the ideas and techniques I tried with this project. Using layers, adding and subtracting, is a powerful technique to bring real life effects to our small-scale world.

—Rick Lawler

MMiR RECCE

Tamiya Komatsu G40 Bulldozer- Japanese Navy. Kit number 32565. Suggested retail price $21.50. Kit graciously provided by Tamiya USA.

Amphibious invasion!

AFV Club rocks the LVT-4 Early Version

The LVT (Landing Vehicle, Tracked) is a prime example of what made the U.S. so successful in WWII. Moving men and material: getting there "the firstest with the mostest," if you will. The LVT had two huge advantages over conventional landing craft. It could climb over submerged obstacles such as reefs and it also could move inland once it hit the beach. Other countries gave the amphibian concept a shot, but no one else really came up with a series of vehicles that could so effectively move all that war stuff from the ship to the shore and beyond.

If you follow the timeline, the LVT-4 was actually the third model to see action. For the LVT-4, the basic LVT-2 layout was re-vamped by relocating the rear-mounted engine forward to behind the driver's compartment. With this done, cargo space was increased and a rear ramp was added. The LVT was used extensively in the Pacific after it's introduction at Saipan and in Europe during the late part of that campaign (think Rhine Crossing).

Kit number 35205 from AFV Club represents the early production model of the LVT-4. The easiest way to tell an early model from a late model is from the front. The early model driver's compartment front plate has a hinged vision hatch that can be raised for the driver to look out of. On the late model, this front plate is revised. Four smaller vision blocks are present and the driver's vision hatch is eliminated. A ball-mounted .30 caliber machine gun was added to the co-driver/ radio operator's side of this front plate. The layout of the driver's compartment roof also changed. The periscope was eliminated from the driver's side escape hatch. The gunner's escape hatch was moved slightly aft on the roof plate to accommodate the .30 caliber mounting. A mooring post replaced the grab bar on located just forward of the front plate just mentioned.

Sometime during the production run of the later model LVT-4 the rear ramp was re-designed as well, with the tubular cross bar that ran the width of the vehicle eliminated and the guards for the pulley system on the upper ramp sides beefed up, but that's a story for another day.

What's in the box?

At first glance, this model is pretty much what I have come to expect from The Club. Despite the tracks being molded in vinyl lengths, there are still a lot of dark olive drab parts in the box. Most of these are for the suspension. However, the flat panel construction of the hull adds to the complexity a bit. All of this lovely styrene looks mighty sharp, with just a few knockout marks here and there and a hint of flash to keep you on your toes. A small sheet of photo-etch brass, a thin length of cable, and markings for five vehicles are there, too.

Assembly looks pretty straightforward, even though 37 assembly steps seems like a lot for my rather short attention span. What were we talking about? Oh, yeah... a model.

Just to give you a clear idea of where this narrative is going, I'm going to talk about how I built this model (basically according to the instructions) and then I'll make some suggestions to make your life easier.

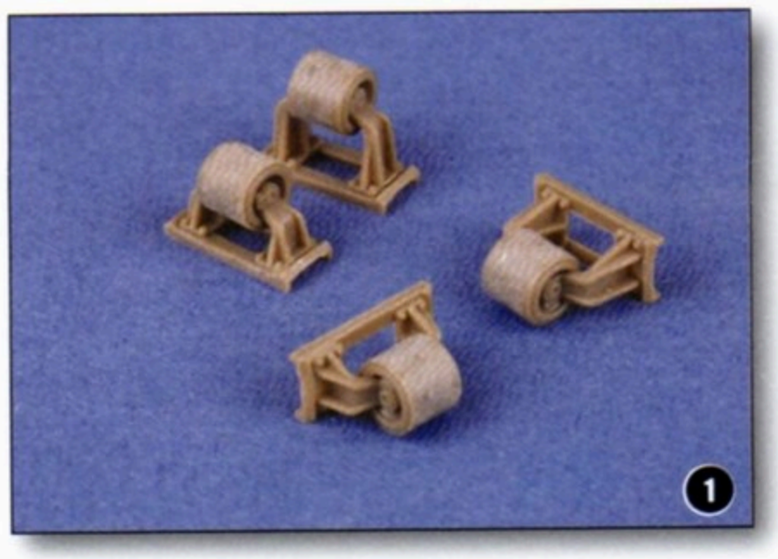
Things start out pretty good with assembling the return rollers. The tall ones go in the back, people. The toothed rear idler subassembly is mighty sharp looking and right away you can see that the detail level on this kit outshines the older Italeri LVT offerings. AFV Club includes the side armor plates as a separate part. This is cool since some of the early LVT-4's had field expedient side armor that looked at little different. Also, don't forget to look at the errata sheet in the bottom of the box for step three. Those bumpers on the lower front of the sponson are made up of two parts, not one like it shows in the original instructions. There are some pin marks to clean up on the hull sides and I fill some gaps where the rear idler subassembly attaches. Don't waste your time with the gaps, as you don't see them later.

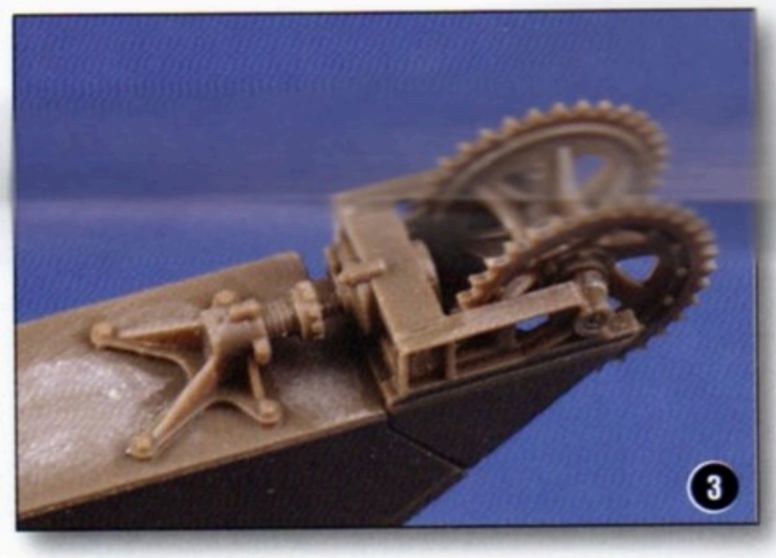
From here, I start to build up the hull sides. In steps five and eight the hull side sponsons that hang out over the suspension are built and installed. It is really important to line these up properly, or there will be problems with the rear hull plate later. They must sit perfectly perpendicular to the hull sides. I block off the photo-etch screen that covers the engine exhaust outlets on both sides with some sheet styrene. This area of the model can't really be seen when it's complete. I end up with a gap on the interior side near the rear stowage locker on the left hull side, but not the right after adding the top sponsons.

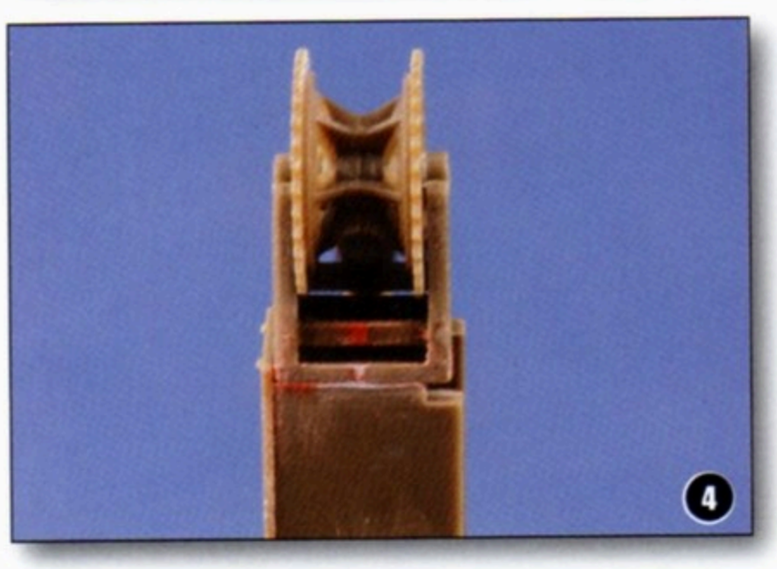
On the hull sides, there is an option to use either a tie-down cleat or a mooring post for the rearward mooring points on each hull side. It's important to check your references on this. The cleats appear to be a lot more common. The separate cargo net rings and attachment points are nice details but some of the small detail parts that stick out on the hull sides brake off during assembly. My favorite detail was the fire extinguisher. It's a real beauty.

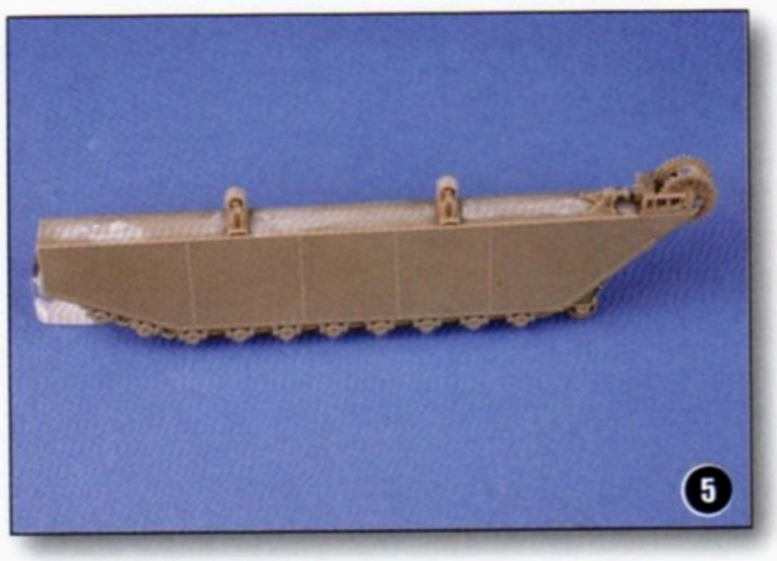
After putting the junk on the hull sides, it is time to double back and do some work on the suspension. The front drive sprockets have poly caps. This comes in handy when installing the tracks. Each of the

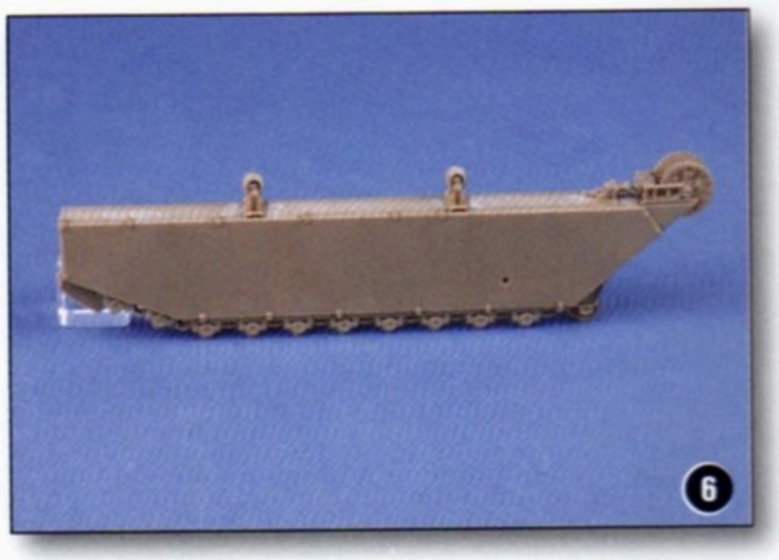
(continued on page 38)

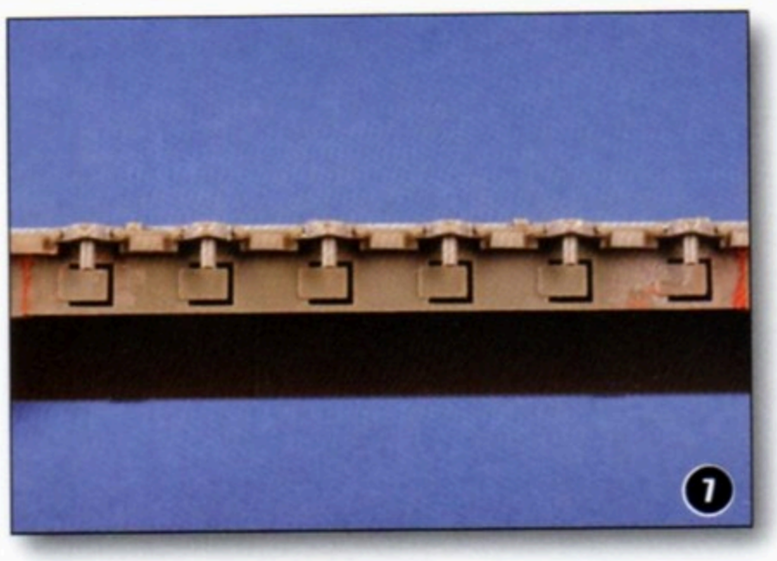


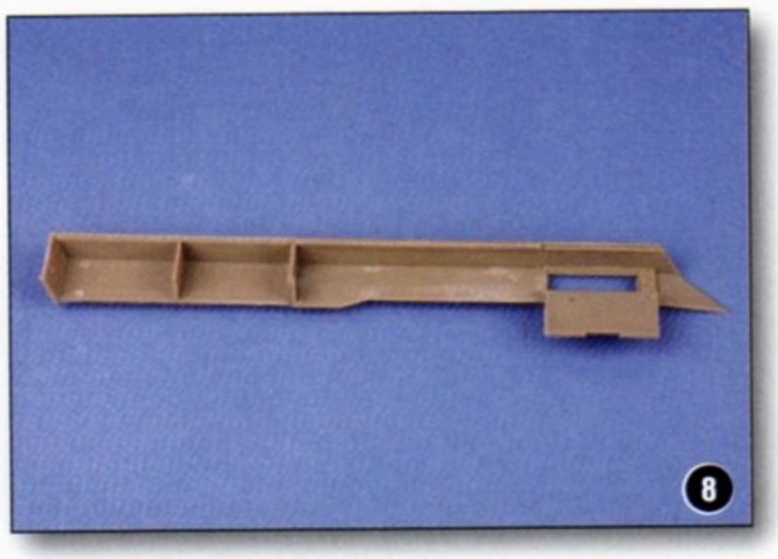


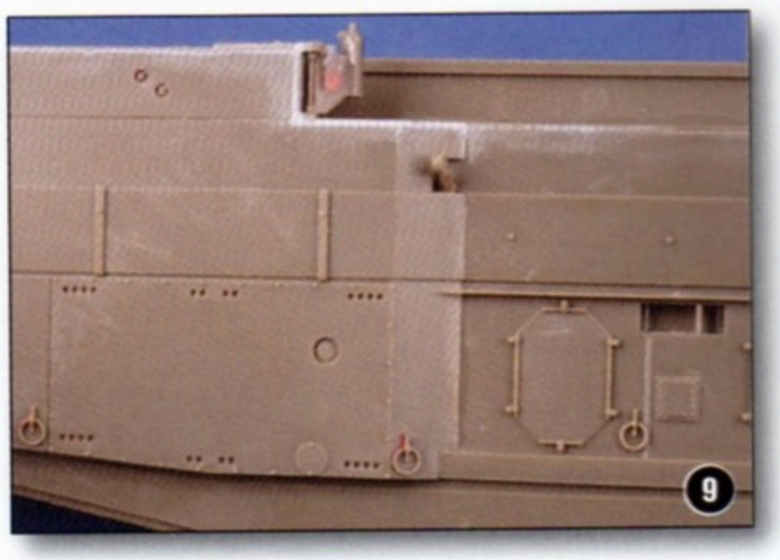


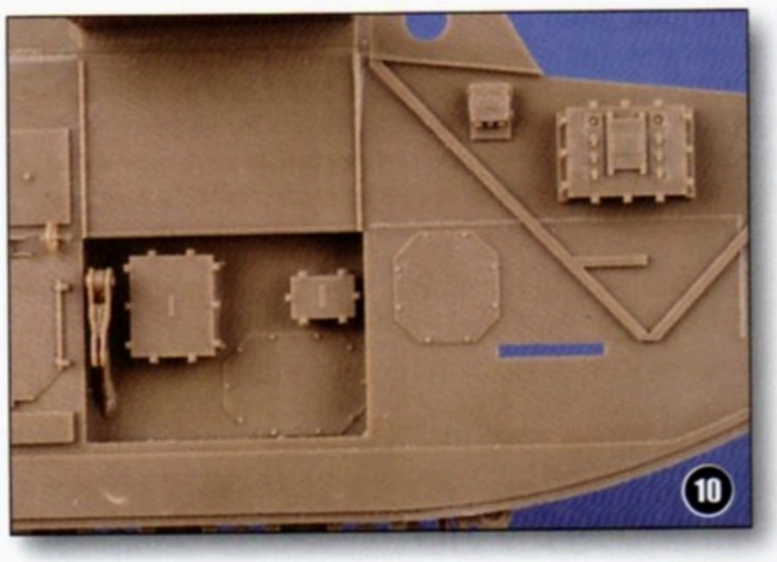


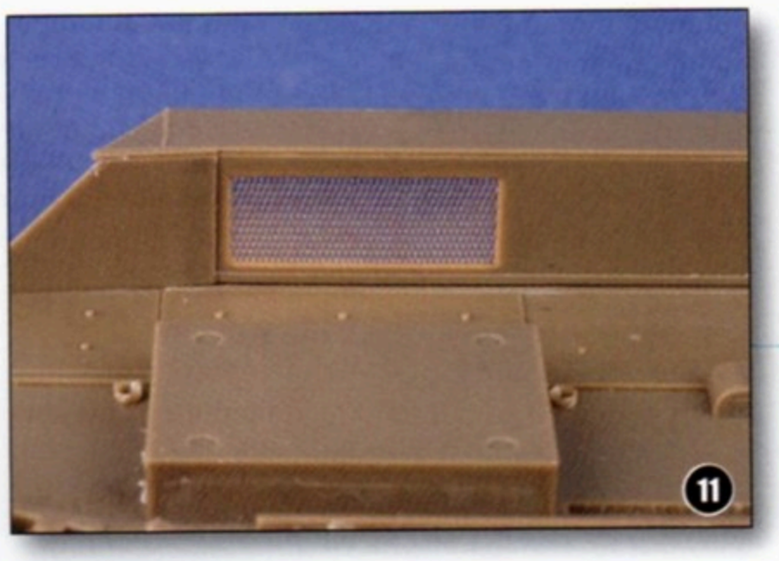


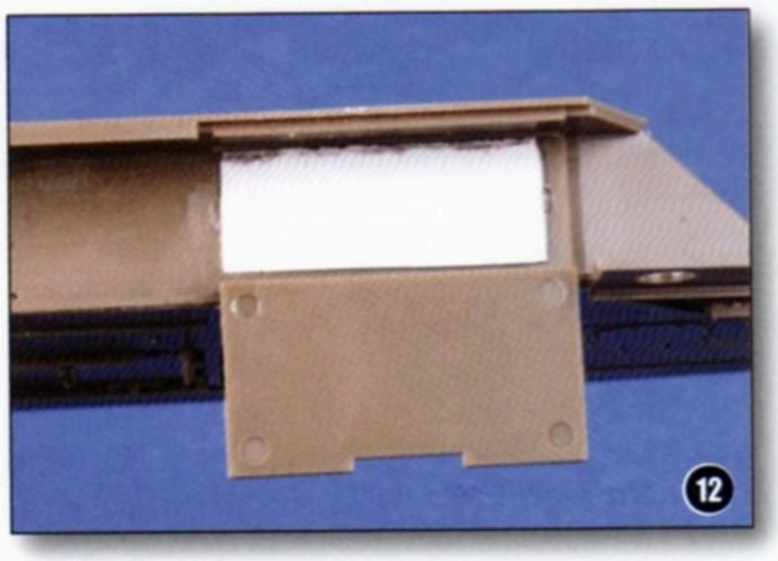


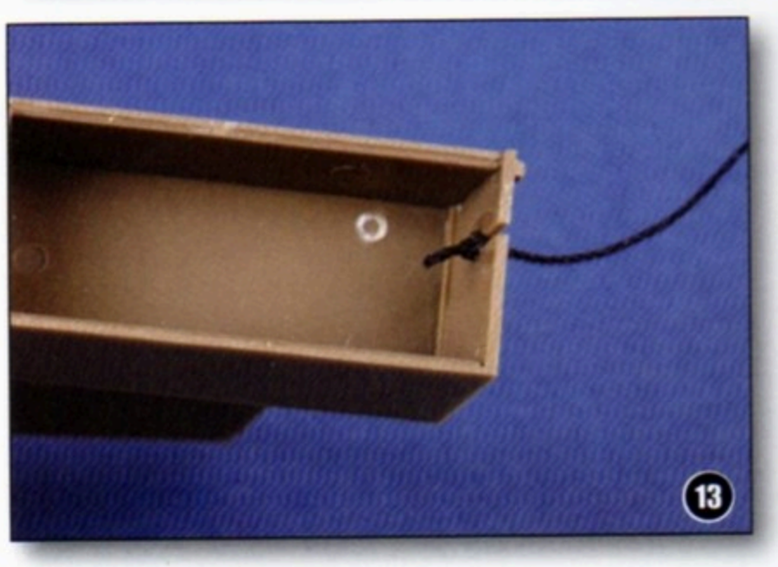


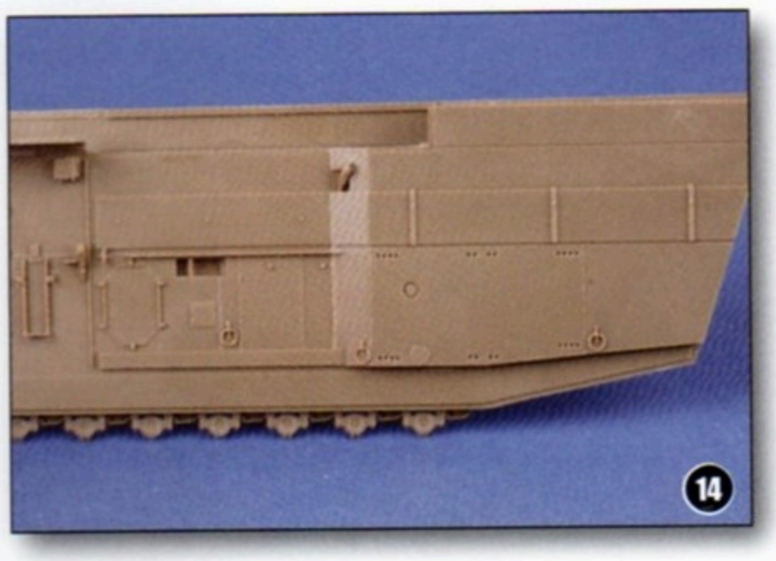




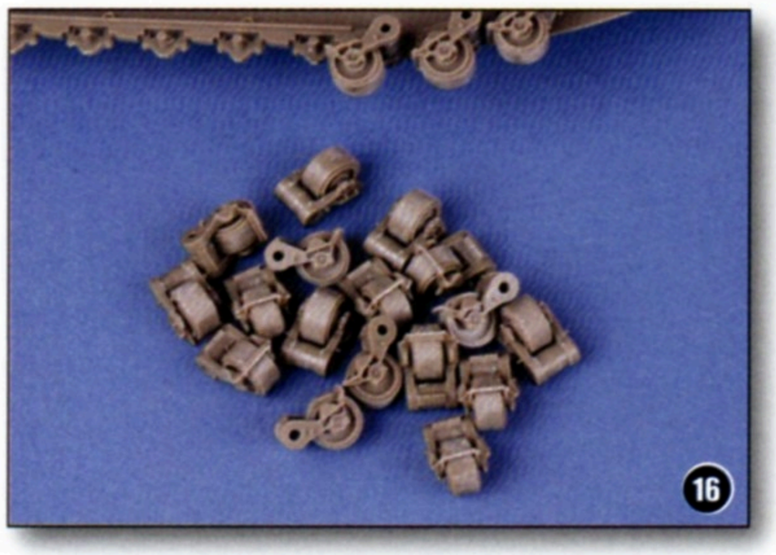








1, **2**. *The return rollers and toothed rear idler sprocket illustrate how crisply molded and detailed this kit is.* **3**. *The rear idler in place on the suspension sponson. I leave this wheel to turn freely as it helps with mounting the tracks later.* **4**. *Filling in the gaps on the rear of the sponson is unnecessary, since this all gets hidden.* **5**. *The suspension sponsons have loads of nice weld bead detail in case the armor plate is left off.* **6**. *That side armor is one piece, attachment points and all. This type of armor plate is very prevalent on LVT-4 s.* **7**. *Those little tabs on the bottom plate of the suspension sponsons are the key to AFV Club to getting to sit this vehicle properly.* **8**. *The hull side sponsons are constructed from three pieces. It is important for later construction that this sub-assembly is mounted perpendicular to the hull sides!* **9**. *I have a little filling to do on the left cargo compartment wall but the right side fits perfectly.* **10**. *A taste of some of the fine detail on the interior hull side.* **11**, **12**. *I block off the exhaust vent screen with sheet plastic.* **13**. *To secure the retracting cable, I tie a knot and then put CA glue on it.* **14**. *The tie-down rings are molded separately. The upper tie-down in the middle of the picture (K29) likes to break off. The carpet monster eventually eats my part for the left side.* **15**. *The best little fire extinguisher on Iwo. Seriously, this is my favorite detail.*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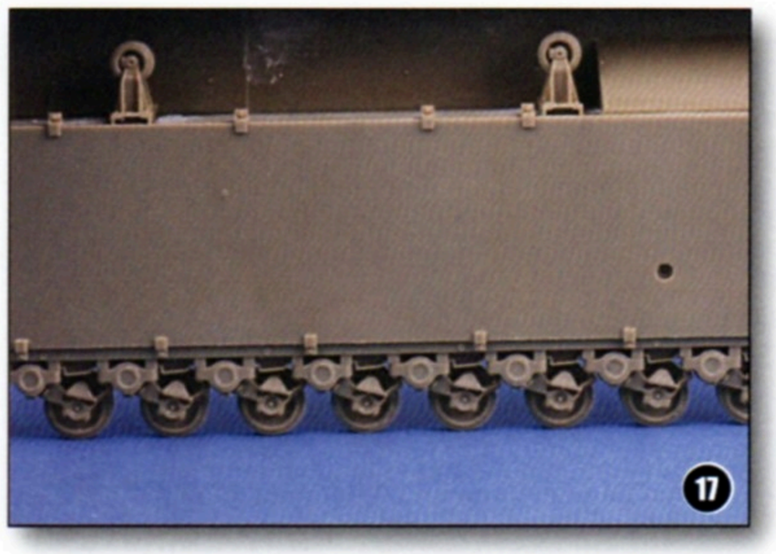
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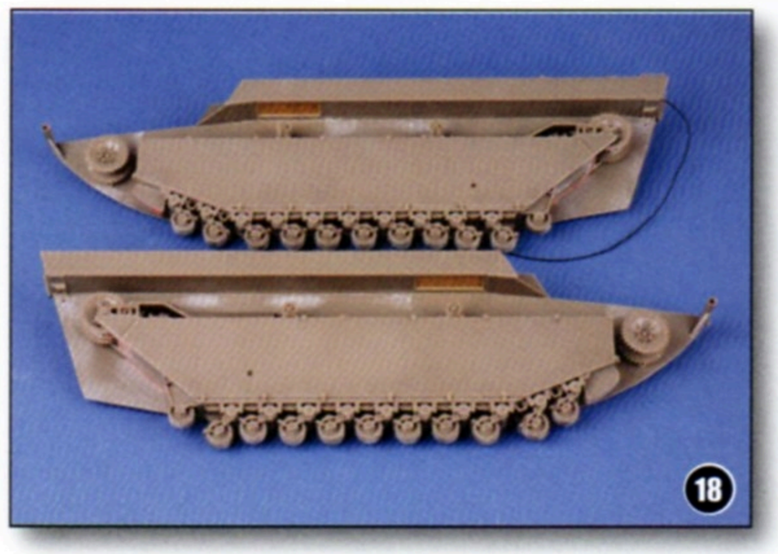
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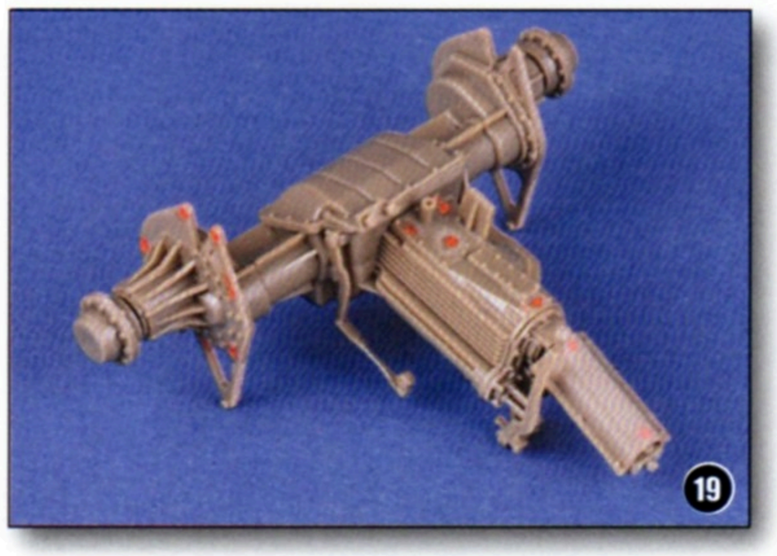
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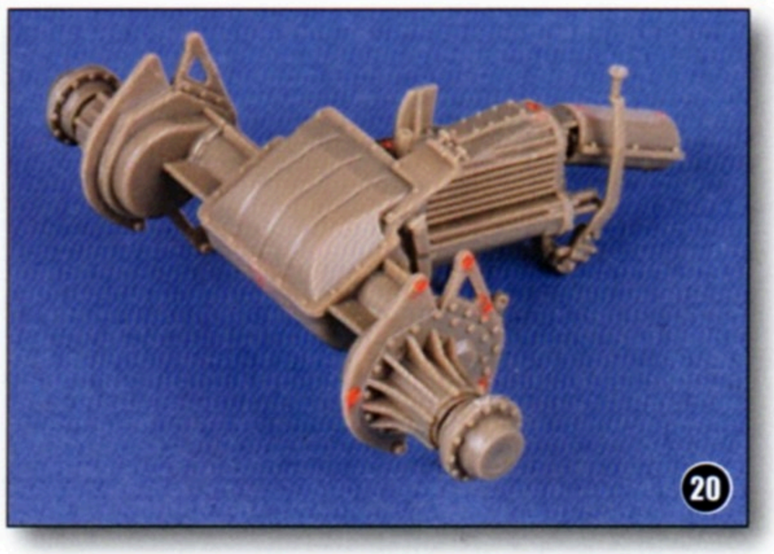
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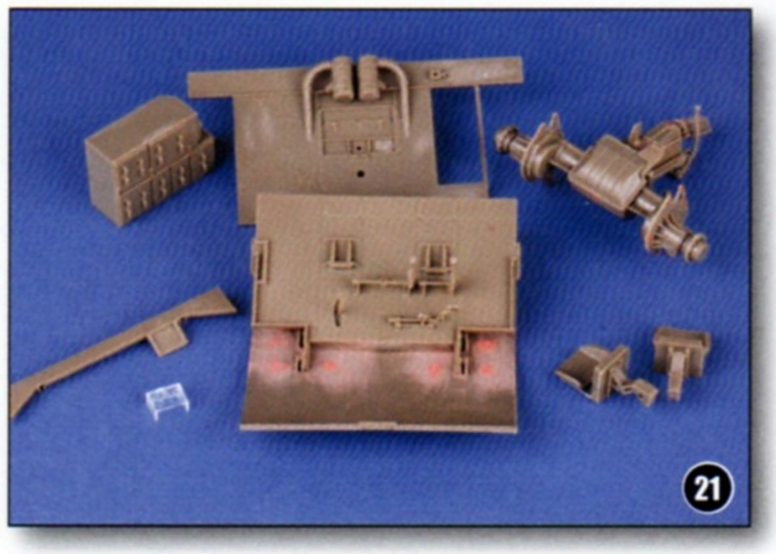
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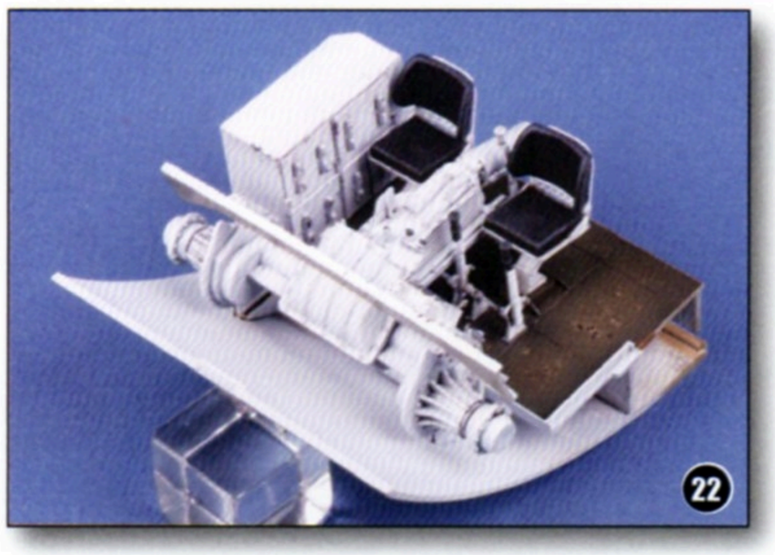
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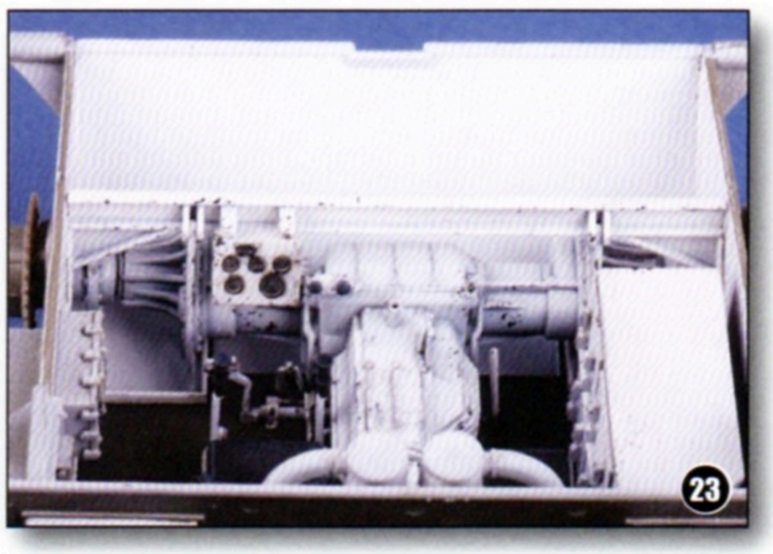
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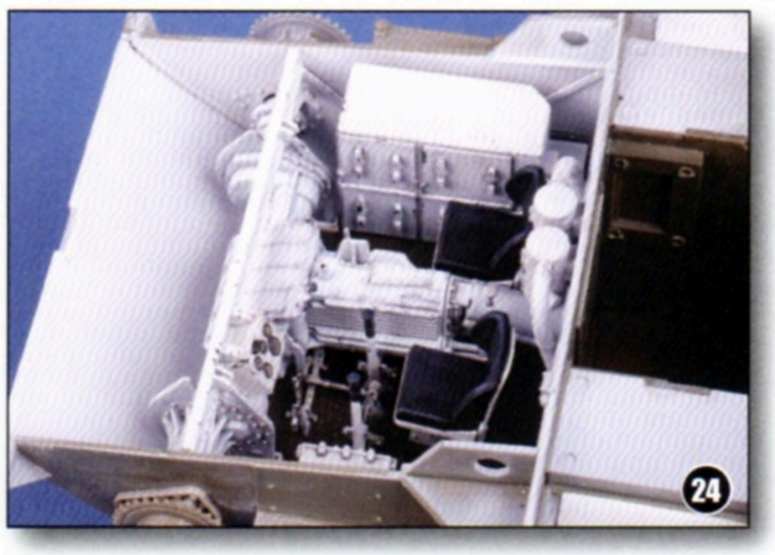
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***16**. Each road wheel (there's 20) is made of four parts. They mount on pegs molded in to the hull side plate and then... **17**. You add the suspension sponson. Voila! AFV Club did an excellent job at engineering the suspension for the proper rider height. **18**. Here's a view of the completed hull side subassemblies. I recommend building up the hull "tub" before adding all of this stuff on. It's easier to get any alignment problems out with those big flat plates out of the way early. **19**, **20**. The driver's compartment for the LVT is very accurate, yet simple. Here are two views of the multi-part transmission. **21**. Details for the driver's compartment were left separate for painting. Leaving the floor plate (B43) off the curved bow plate (F4) will make life easier. **22**. I add paint. Most of this cannot be seen when you put the hull together. **23-26**. Here are a few shots of the painted interior prior to assembling the hull. The engine compartment walls are set in place, but not glued. **27**. Getting those big flat plates to line up was a bit of a wrestling*

little road wheels is a subassembly made up of four parts. There are a lot of them. They are trapped between the hull side and the suspension sponson to complete the suspension. The result is a thing of beauty, as the ride height is perfect as these little road wheels are properly sprung.

One thing I notice while looking at reference pictures is that a lot of the surviving vehicles are bottomed out, with the rubber bumper above the swing arm touching the bump stop on the hull. If you look at period photos closely, you see a gap there, just like in the kit.

The driver's compartment comes next. I have no problems here and the detail is pretty complete when I compare it to available reference. I build up the seats, rear wall and transmission and then leave them separate for painting. The transmission is a wonderful little multiple part affair. It seems a shame that you hardly see it when the kit's done. The driver's instrument panel is a clear box that has a little transparent slide you stick in the back for the gauges. Neato. I masked off the dial faces with Micro Mask.

I stray a little from the assembly sequence here because it is time to add paint to all of the sections that will be impossible to reach later. First I paint the driver's compartment pieces (floor, radio, transmission and seats) and then put them together. If I were to do this model again, I would leave the floor plate (B43) separate from the curved front hull plate (F4). This would have made painting this section easier. I also paint the hull side details. I then paint the engine compartment parts from step 21. I also skip ahead to step 22 and assemble the driver's compartment roof, leaving the detail parts off and adding a coat of white paint to the underside.

This is the point where assembly gets a bit screwy. In step 19, the hull sides and floor go together. Things here seemed to line up more or less except that the hull bottom sat slightly proud of the hull side panels. This is barely seen on the completed model, but it's there. I fill the gap with some strip styrene and filler putty. In step 21 the engine compartment panels are added. The fit on these panels is tight and I have to file down the locating tabs that go into the hull floor to get them to settle down right. Part D1 is also added to the rear hull at this point. This U-shaped part blocks off the openings around the ramp area in the rear hull. While it slides into the left side nice and smooth, I end up with a weird gap on the right side. I have to shim this with a sliver of styrene and then smooth things over with putty. Sanding is also involved, lots of it.

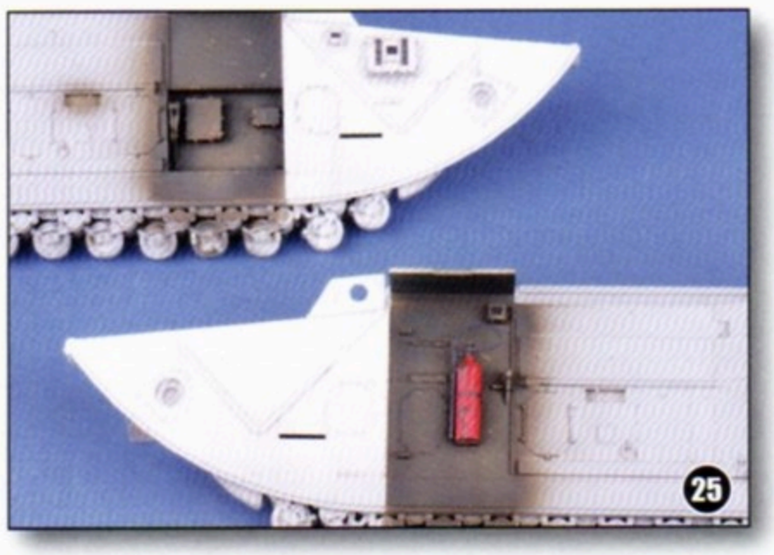
I also add a grab bar underneath each hull sponson from scrap box parts. It is visible on the underside of the hull sponson about halfway down the vehicle side in many reference photos.

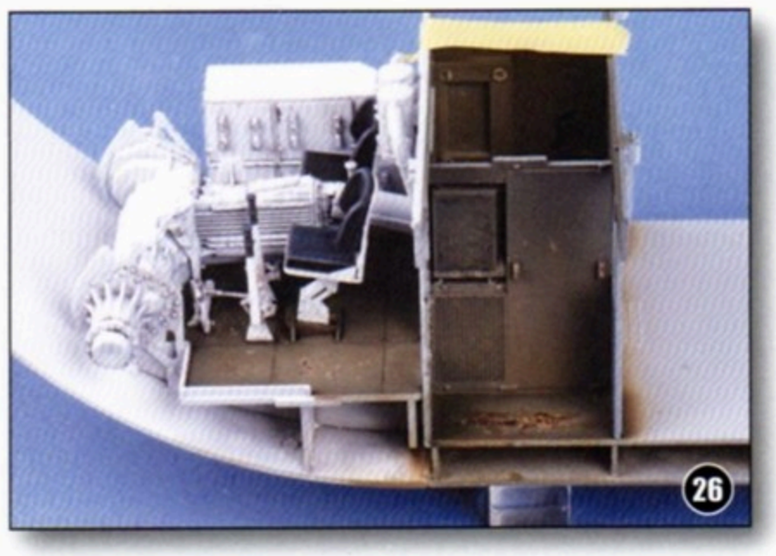
Let's keep moving. People start knocking after the second flush, ya know?

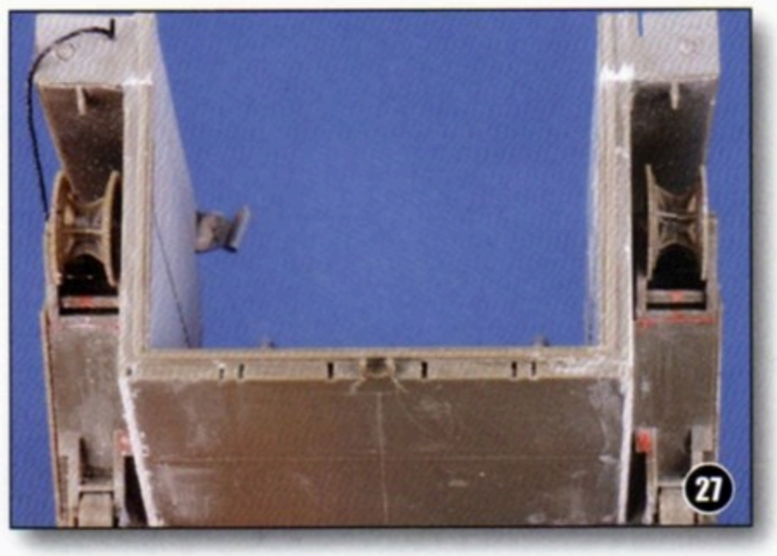
The driver's compartment roof comes next and this doesn't fit quite as advertised either. After some wrestling and lots of CA glue to hold things steady, I put a shim of styrene in on the right side to fill the gap in the front and also fill in some minor gaps around the roof perimeter with Mr. Surfacer. I add weld beads made from stretched sprue on the front panels of the driver's compartment plates, too.

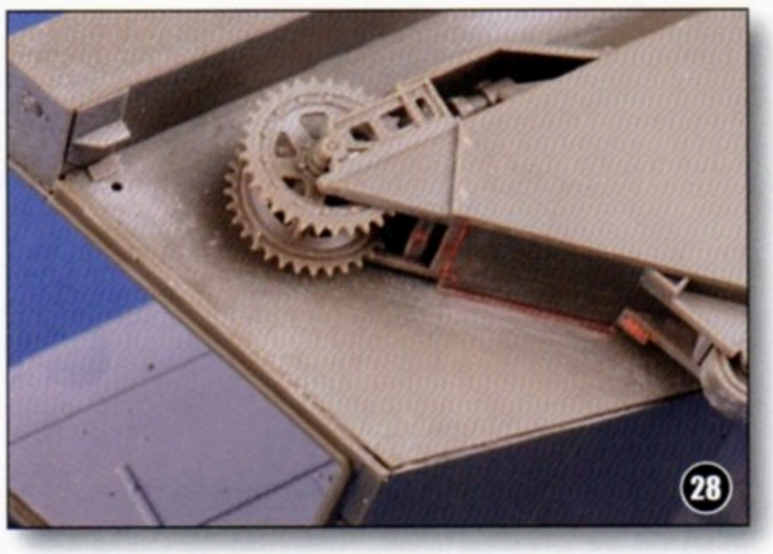
After I am satisfied with the way the roof looks, I add the leftover detail parts from steps 22 and 23, such as the headlights, cleats and grab bars. The escape hatches for the crew compartment are nicely detailed on both sides. Along with clear periscope parts, little clear domes are included to simulate the protective Plexiglas domes seen on the real thing. These are a nice touch. The periscopes are fine, except for a knockout mark on the front face and the lack of a forehead pad that you see in so many reference photos. I build up the hatches, but leave them and the domes detached for painting.

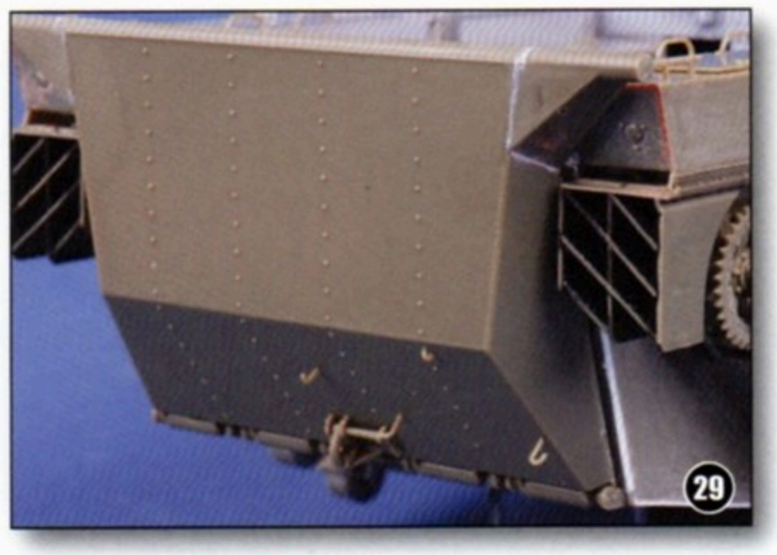
Steps 25 through 30 have me working on the rear ramp. I find three rather minor issues while I take a

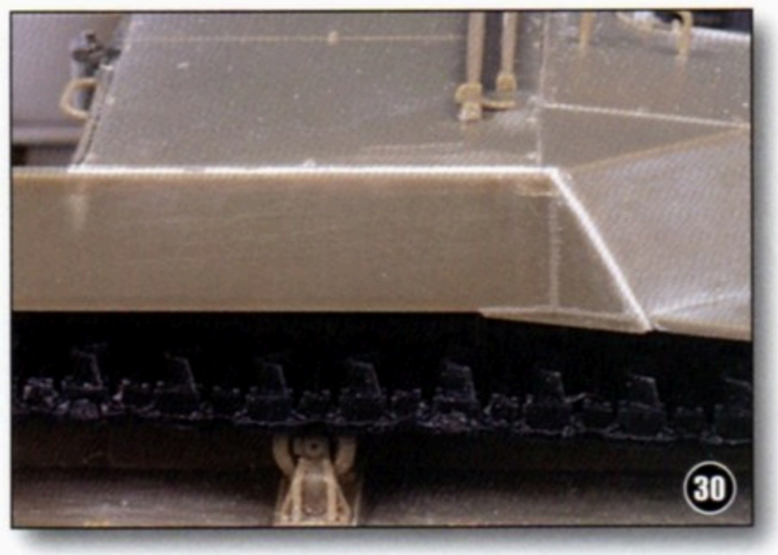


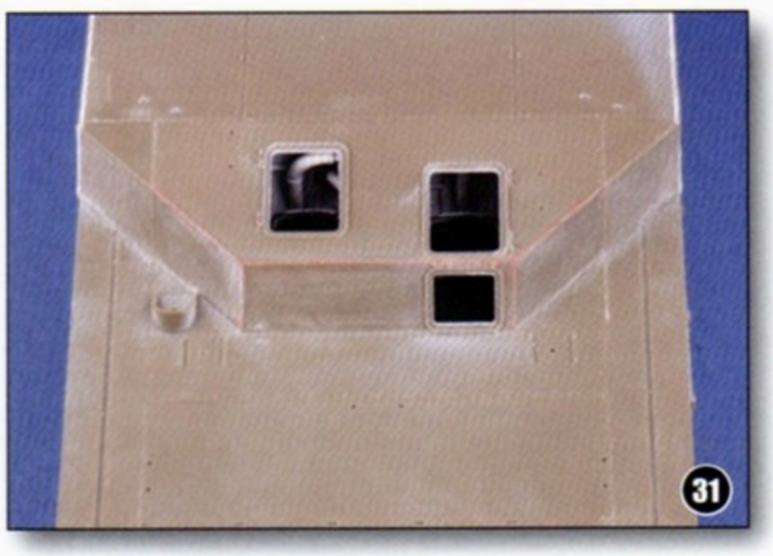


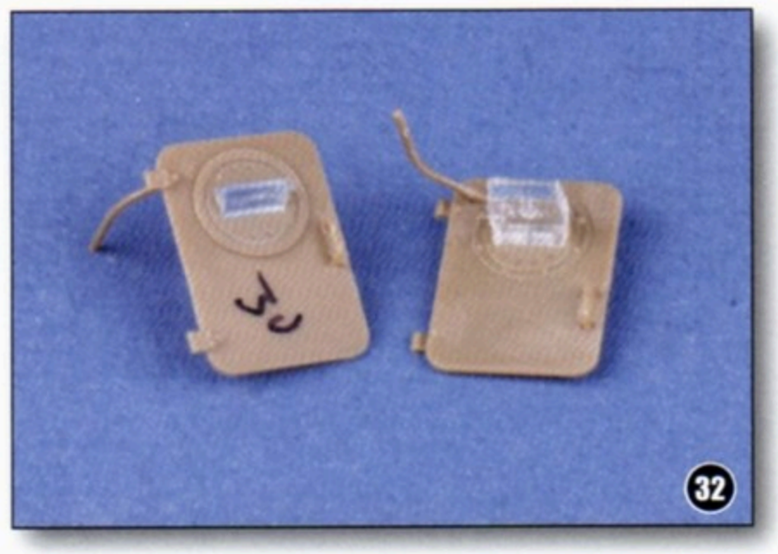


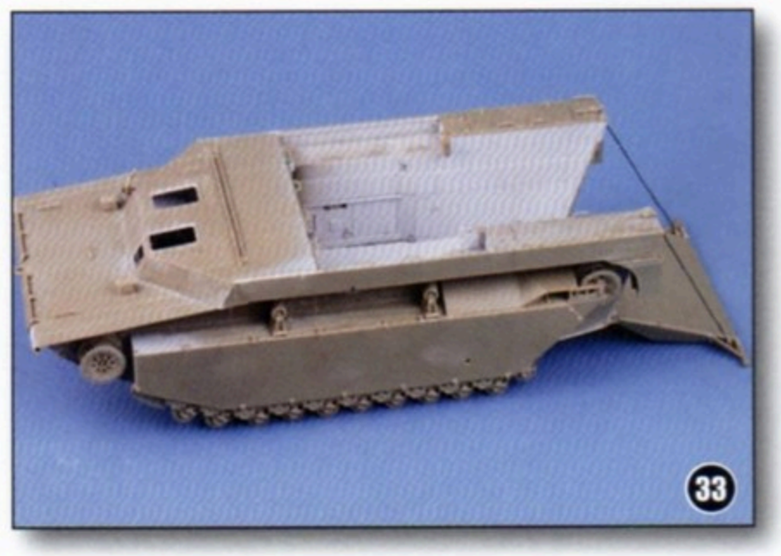












match. **28.** *Pardon my dust. The gaps are filled with slivers of sheet styrene, some Tamiya putty and lots of wet sanding.* **29.** *In the end, things turn out A-OK. This shot shows off some of the nice detail on the rear ramp. Those little hooks break off really easily. Save them for last.* **30.** *The hull roof takes a little bit of wrestling too. I wisely left the detail parts off the front plate for this.* **31.** *The right side where the roof plate meets the hull sponson had a gap. I fill this with sheet styrene and tears.* **32.** *The hatches are really nicely detailed. Two little things I notice are the small knockout mark in the forward face of each clear periscope, and the lack of parts for the forehead pads seen in reference photos.* **33.** *Posing the LVT with the ramp down is fiddly, but it's still an option. Make sure the pulley parts on the side of the ramp (K11-14) are securely attached. I did this for demonstration purposes.*

shot at posing the vehicle with the ramp in the up or down position. The first issue concerns the ramp down. The pulley parts are a little fiddly. The pulley parts (K11-14) in step 26 need to be firmly bonded onto the ramp wing parts they are mounted to (F2 and F3). It may also be necessary to auger the pulley openings to make the retracting cable (that black string) pass through more easily.

The second issue is really important if the ramp is posed in the up position. In step 28, there are a total of eight hinge pieces that attach the ramp to the hull. These parts (four K15 and four K16) must be trimmed of any excess plastic. I suggest tacking them in place with a small amount of cement so that they still have some play. All three sides of the ramp should be checked at this point to ensure there are no gaps between the ramp and the hull. It may be necessary to pull off the hinge parts and trim them to make sure everything is flush. The last minor warning is that the tiny hooks (parts K2-6) that attach to the ramp back panel in step 29 are very fragile and tend to break off. There is some filling to do here with when attaching parts F2 and F3 to the main ramp, but no big deal.

The water boxes mounted on the rear hull are a little tricky to assemble, but they look great as the parts are nice and thin. Remember when I talked about making sure those upper hull sponsons were perpendicular to the hull sides? Well, if they're not, things will definitely look crooked when you mount the water box subassemblies in step 32.

After attaching a bunch of grab handles and stuff in steps 33 and 34, it's time to put together the machine guns and the shields. Since the armament and shield configuration is one of the things that will make my vehicle distinctive, I make sure to study those reference photos. I'll explain more later.

The machine guns and mounts are top notch. The left side of the receiver body on the .30 calibers has a small knockout mark. The little ammo boxes on the mounts look kinda wimpy, but I check out every period photo I have and these are what were actually used on the vast majority of LVTs. There are also some photo-etch brass parts: Butterfly triggers, a sight for the .50 calbers and some small retaining chains. I leave these parts off. The .50 calibers already have a trigger molded on and the photo-etch sight piece is pretty rarely seen. Despite my fetish for teeny chains, these looked too big, so I ditch these, too.

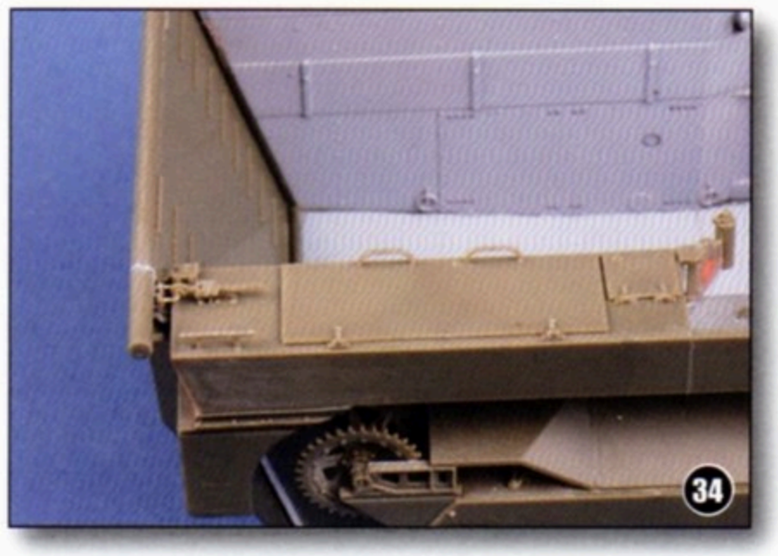
As for gun shields, there are three options. I think this is excellent. Here's a very general guideline on these. The box-shaped shields were seen on some U.S. Army vehicles in the Pacific (Philippines) and Europe. The British also had them on some of their LVT's. The round shields are seen on a lot of USMC LVTs. I did see one shot of these on a U.S. Army LVT in Okinawa. The flats shields are kinda boring, are also seen on several vehicles from Okinawa, so keep this option open. There are some knockout marks to fill on the backs of each different type of shield.

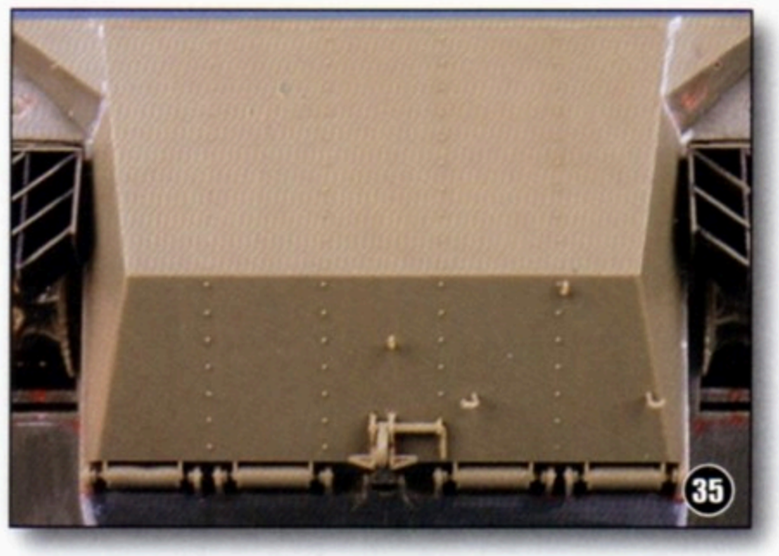
The last step is the tracks. They are beautifully detailed. They glue together nicely and take paint well. However, they have a mold separation line that is impossible to remove. The same goes for some of the sprue attachment points. Some of these attachment points are impossible to hide because each track comes in two pieces. One piece has two male ends and the other has two female ends, so you can't just switch the track pieces around to hide the attachment points. I tried—twice—yuck.

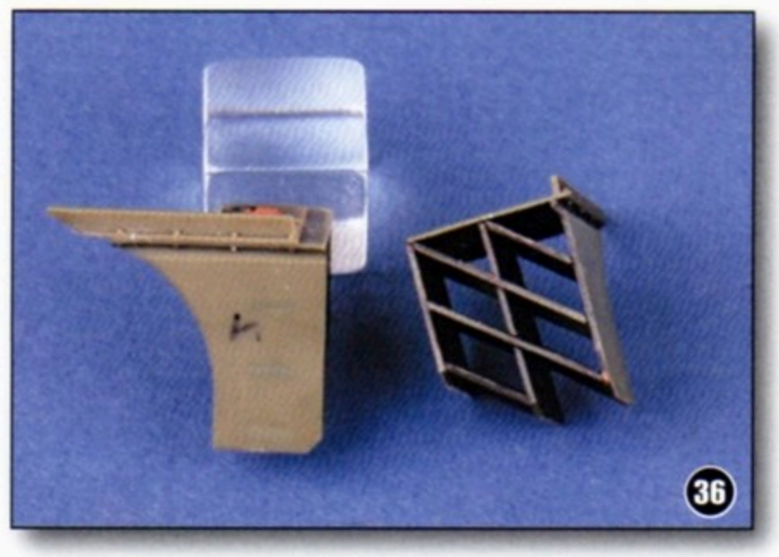
Before I start painting, I add some Tamiya ammo boxes and gas cans, a Dragon M1 Carbine and an M1 helmet to the cargo compartment to keep it from looking too naked. Decals from AF77009 were used on the appropriate faces of the ammo cans.

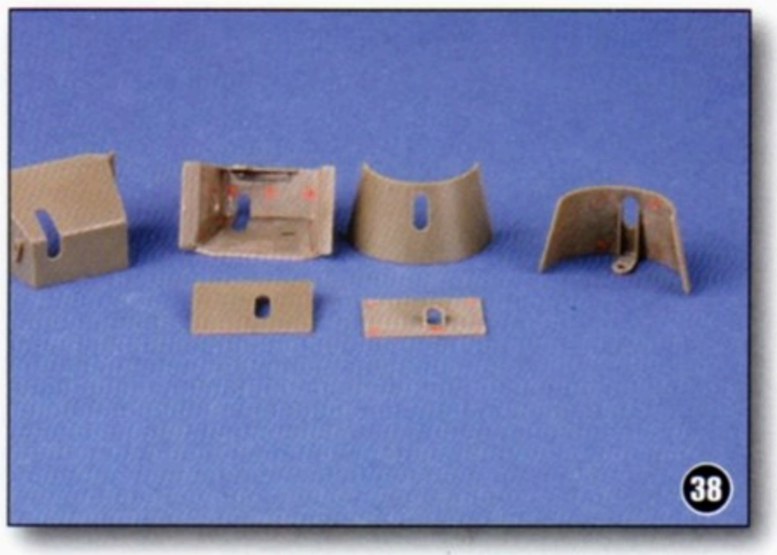
Crawl to the finish

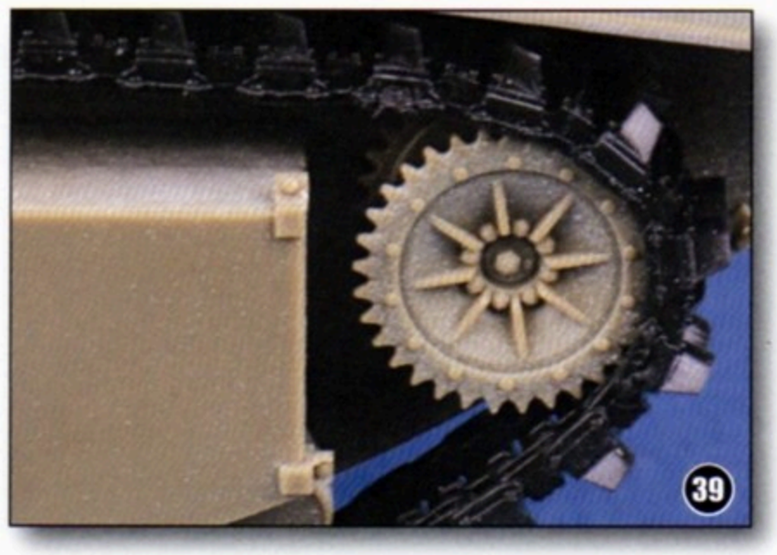
I found reference pictures of the actual vehicle for three out of five of the options shown in the back of the instructions: A, B and E. I really dig the paint and markings option E for the 7th Infantry Division at Okinawa. It has a three-color hard edge scheme

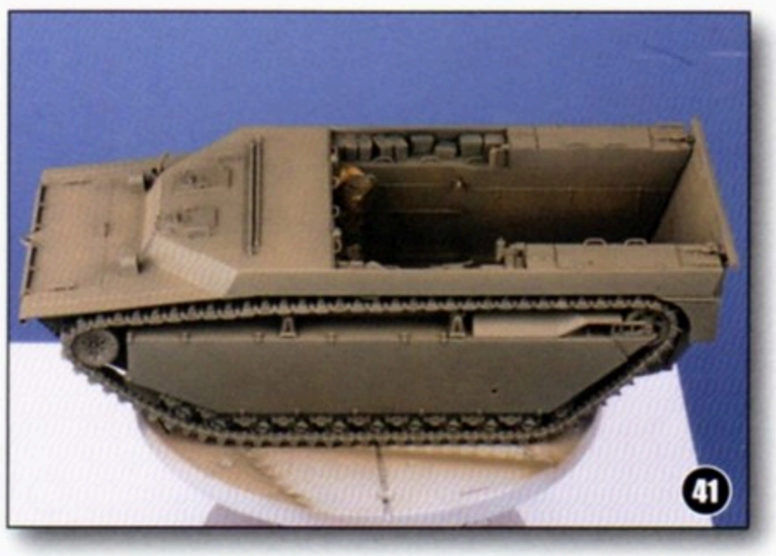


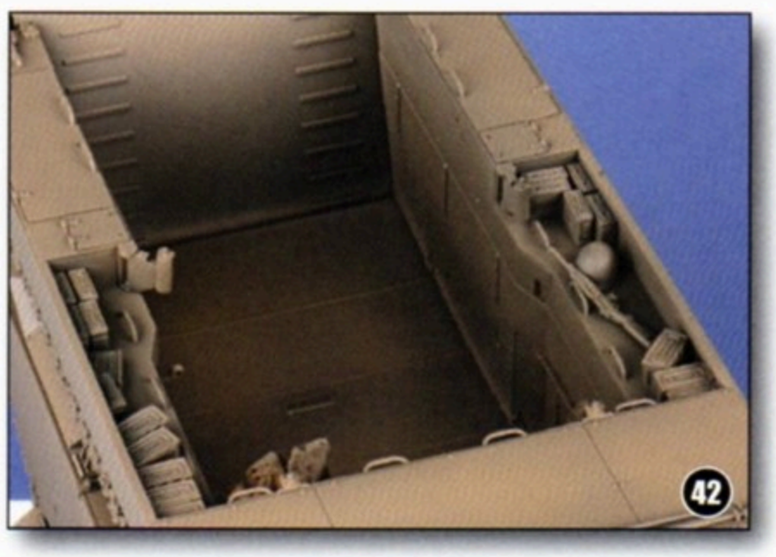












***34**. Ramp up. The clamps that hold the ramp in place are a nice detail.* ***35**. I take my time aligning the eight hinge pieces on the ramp so that the ramp sits flush against the hull rear. I have the water boxes in place in this shot. If the hull sponsons aren't perpendicular to the hull sides, these will look all wonky when installed.* ***36**. A look at the water boxes before installation. These are rather fiddly multi-part subassemblies, but the end result is very pleasing.* ***37**. Two .50 caliber MG's and two .30 caliber MGs are included. They are pretty fabulous even without the optional photo-etch parts. Note the knockout mark on the .30 cal.* ***38**. Three shield options are provided to give your LVT some personality. The box type shields are multi-piece affairs. Watch out for those knockout marks.* ***39**. The tracks have a mold seam and the carrier attachment points can only be hidden on half the track. This is because one half of each track comes with two male ends and the other with two female ends. It's a shame because the link front faces are so well molded.* ***40**. The whole model is primed using Mr. Surfacer 1000 and then Tamiya OD was applied as a base coat.* ***41**, **42**. I add highlights and shadows. I make this pretty dramatic as this was originally going to be a one-color project. However, the kit decals didn't pan out and I had to switch gears.*

that looks real schazzy. However, the reference picture of this vehicle I found is a rear 3/4 view and shows that it had a late model rear ramp. (As a side note, in some color photos and footage of this hard edge three color scheme it looks like the "Sand" areas may actually be Ocean Gray) Option B is for an ETO vehicle from Italy. This seems rather dull, even though I found a good picture of it. Option C is for a USMC vehicle from Iwo Jima. I can't find a photo of this one. I notice that it lists the vehicle color as "Dark Gray (1)." Perhaps this is a reference to the Ocean Gray used on LVTs in earlier campaigns. I did some checking around. From what I understand, LVT 4s came out of the factory in 1944 painted overall Olive Drab. It seems the Marines had largely discontinued the use of the Ocean Gray at this point, because of its doubtful camouflage value on land. Option D is for the Taiwanese Marines in 1961. I couldn't find a photo of this one and I wanted to stick to WWII.

This leads me back to option A, which is the vehicle illustrated on the box top with the huge shark mouth. This was a U.S. Army vehicle in service during the Philippines campaign and I found a nice front 3/4 shot of it that the box art is based on.

Things go off the rails when I start applying the decals. They are very thin. I have problems with them wrinkling up as I nudge them into position with a moistened paintbrush. This is even before applying any setting solution. This can probably be fixed by appling a thin coat of decal film solution such as the one from Micro Scale. The real problem I have though is opacity. I can still see the Olive Drab paint through the white markings.

Bison Decals comes to the rescue with set BD-35037, USMC Amtracs. I choose option G from this set, a USMC LVT-4 from Iwo Jima. I found a reference photo of the vehicle depicted. Although the decal sheet calls for three colors (Olive Drab, Sand and Red-brown), the photo of the vehicle and other photos from this unit look like they have only two colors. Before adding the second color, I apply some hair spray. I mask off areas to be sprayed with bluetac then apply Tamiya XF68, NATO Brown. Some highlights are added, too. I then got back and rub off the red brown in some areas using a moistened brush. I try not to get carried away with this. After a coat of Future, I put the decals on and then seal them with another thin coat of Future.

I have to sort out a few last-minute details here because of my scheme swap. I mount one .50 cal MG and one .30 cal MG with the round shields up front, like in the reference photo. I take out some ammo cans on the right side and replace them with four gas cans. I also build a little antenna mount because it looks like this LVT had the normal mount moved inboard. I can see an antenna sticking up just to the right of the .50 cal MG in the picture, but in reality, I'm not sure what this setup is. Since my first choice is to do a vehicle with the four included machine guns on it, I have to do something about those naked side mounts. I cut the mounting cups (G18) off of two assembled mounts and then auger out the top hole, then attach one each to the side mounts (K28). To tell the truth, I'm not absolutely sure about this detail. In some reference photos it looks like the USMC did not use these mounts at all but simply stowed them out of the way with nothing attached. Hmmm...

The detail painting and weathering are pretty straightforward. I did the detail painting and all of the chipping using Vallejo acrylics. Washes and streaking effects are added with artist's oil paint (Burnt Sienna, Yellow Ocher, Raw Umber) and Turpenoid. The metallic effects are all done with a Prismacolor Metallic Silver pencil and a paper-burnishing tool. The tracks are done using AK interactive products, AK083 Track Wash and AK086 Dark

(continued on page 42)

An LVT Primer

Here's a quick and dirty look at the LVTs used in WWII:

LVT(1)

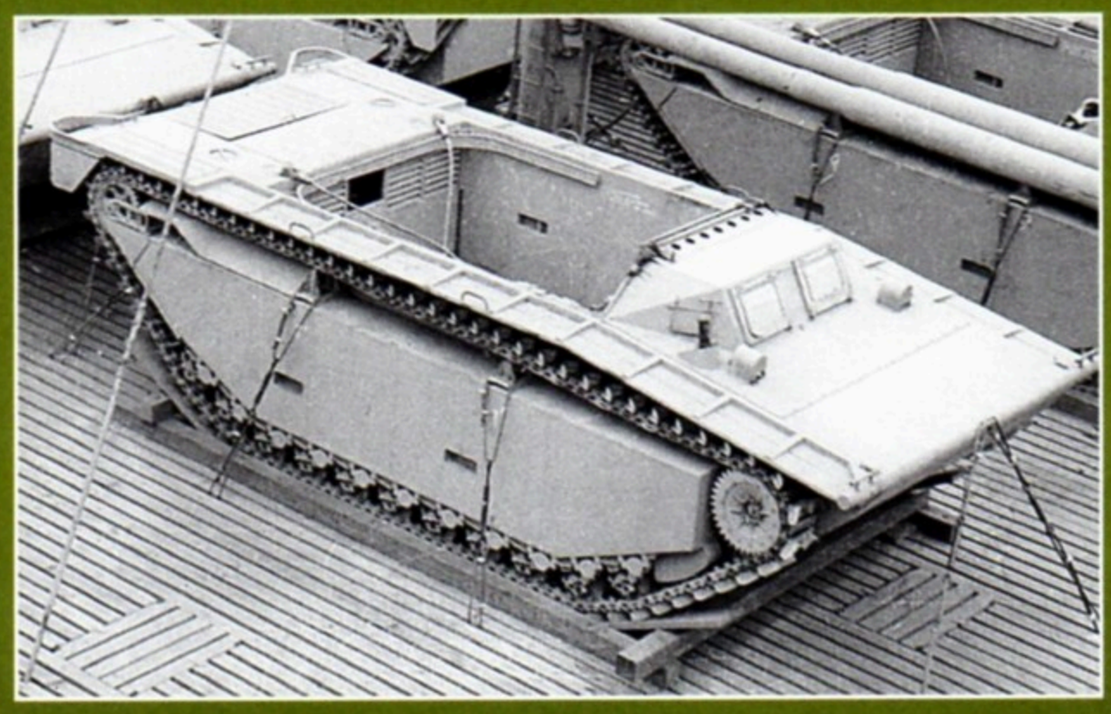
Production: 1,225 vehicles until 1943

- First used in the Solomons (Guadalcanal) in 1942 by USMC.
- This variant was unarmored and only used to move supplies.
- It was felt that a more durable vehicle was needed.

LVT(4)

Production: 8,348(!) up to 1945

- Debuted at Saipan in 1944, used in both the Pacific and Europe.
- Re-designed from the LVT(2) with a better cargo area that held more men (40 versus 24) and cargo, plus a ramp.



LVT(2)

Production: 2,963 from 1942-45

- Debuted at Tarawa, where they were invaluable for crossing over the reefs normal landing craft could not.
- The LVT(2) was also used in Europe.

LVT-A (1)

Production: 509

- The first "Amtank" design, it was based on the LVT(2) chassis.
- First combat in the Marshall Islands.
- Used a turret mounting 37mm gun and multiple .30 calibers.

LVT(3)

Production: 2,962

- The last to see service and only saw action in Okinawa.
- It had the largest cargo bay and capacity.
- Also served in Korea.

LVT-A (4)

Production: 1,890

- Re-design of the under gunned LVT-A(1) with an M8 HMC turret.
- Debuted in the summer of 1944 at Saipan.
- Armed with a 75mm howitzer, .50 caliber and multiple .30 calibers.

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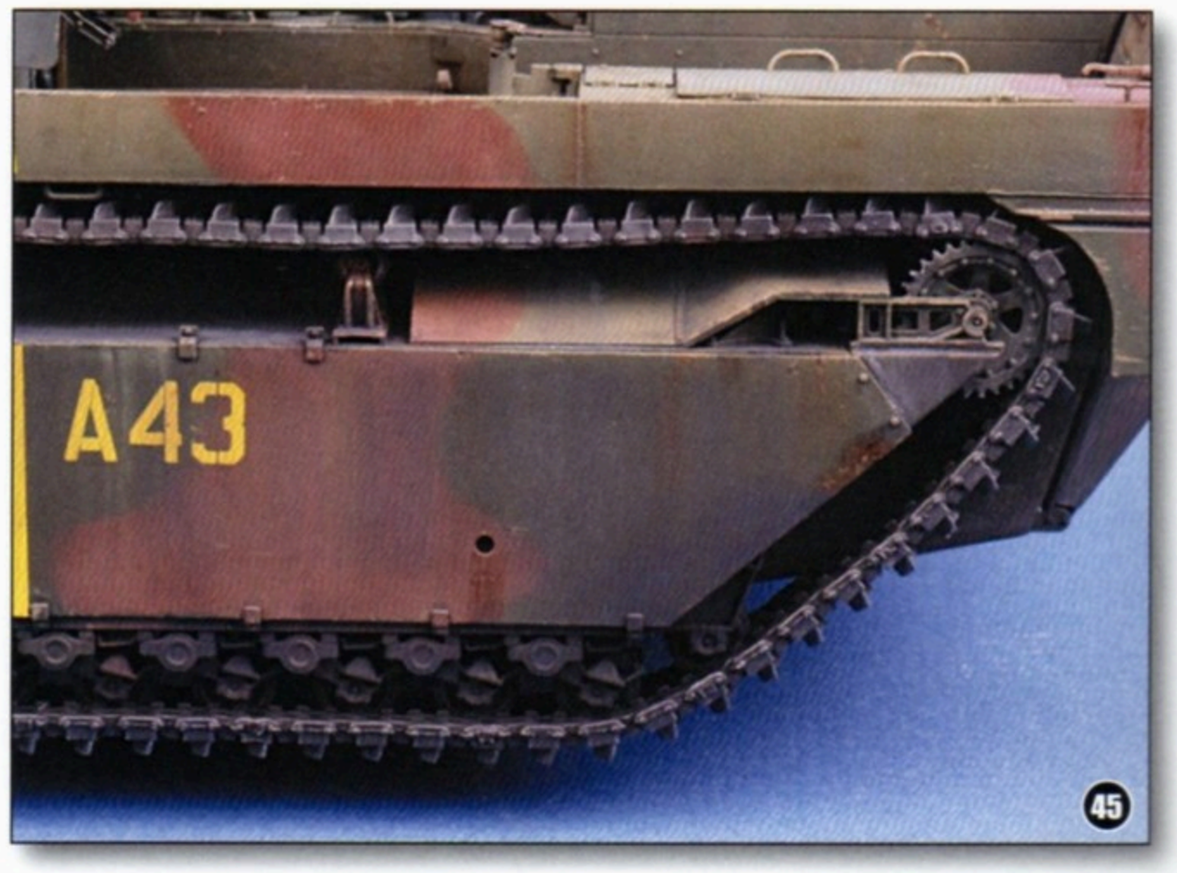

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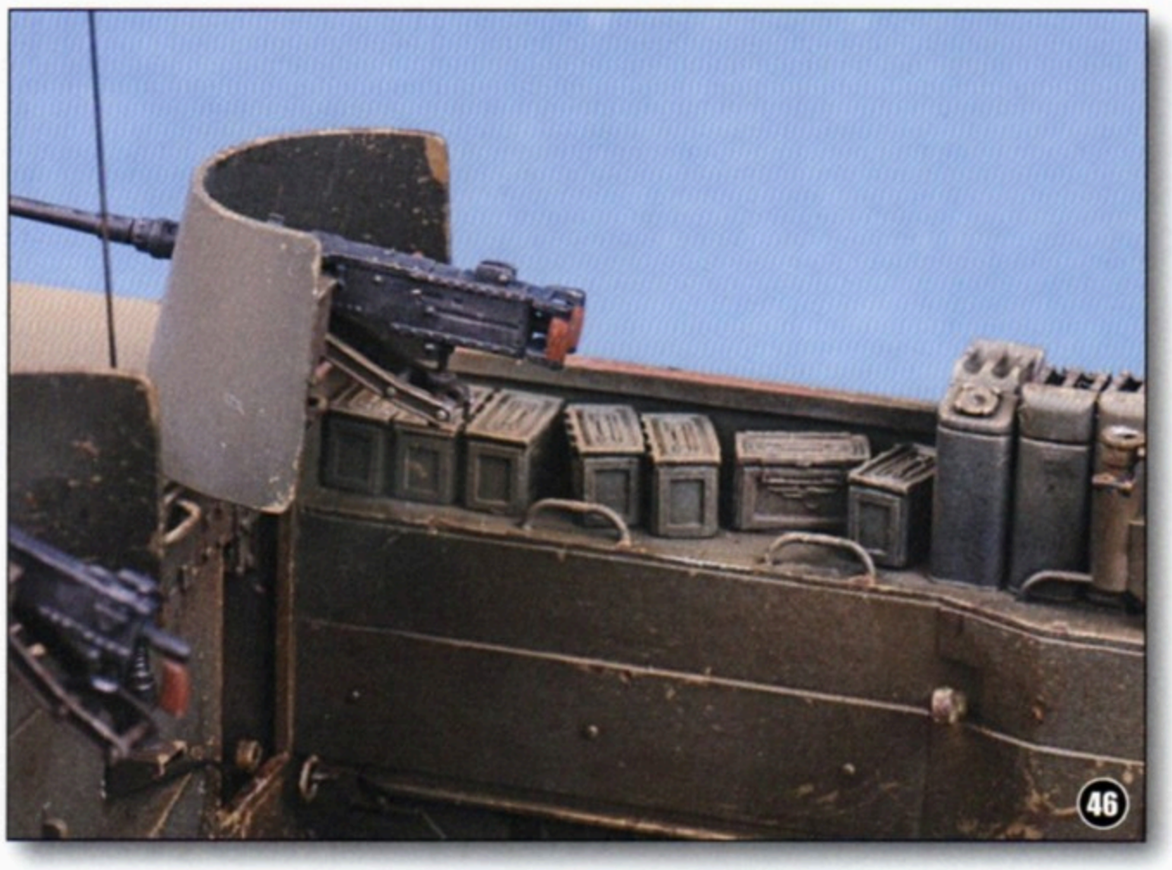

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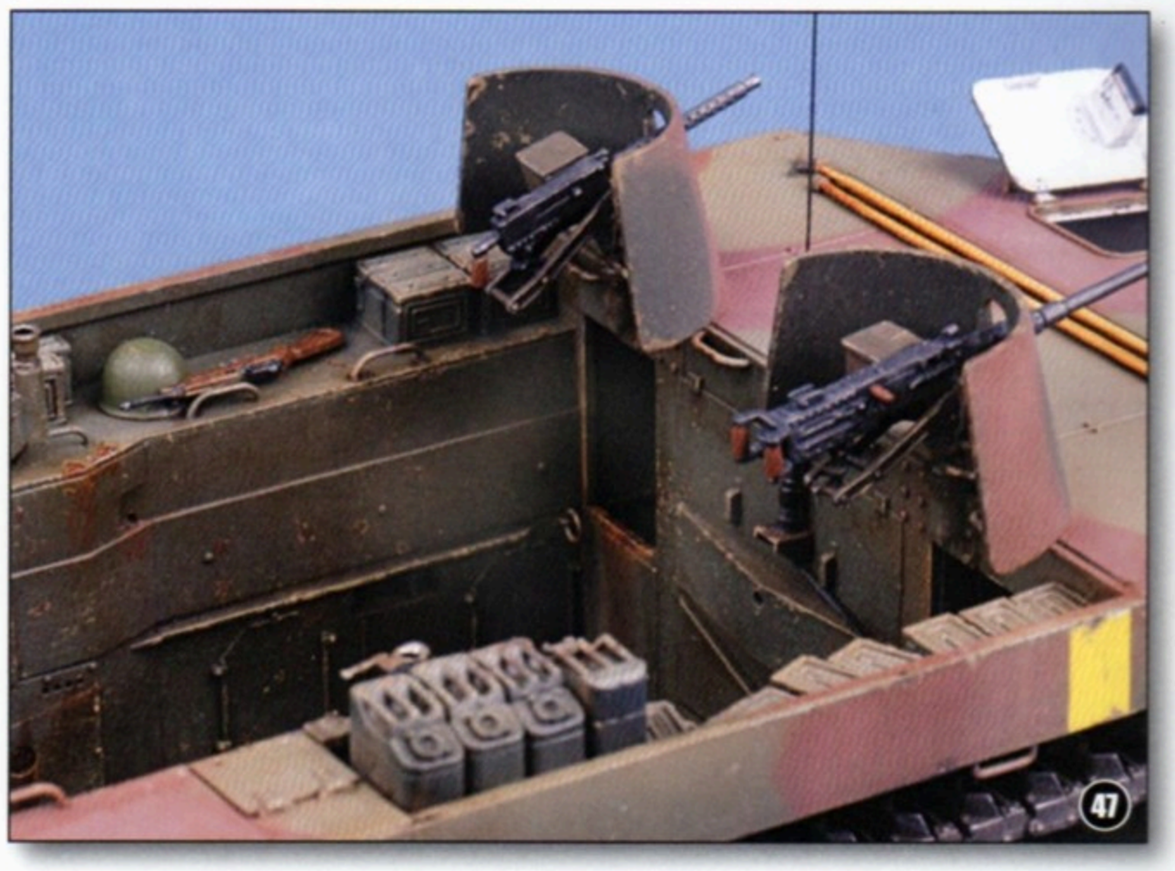

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***44.** I portray my LVT as a USMC vehicle on Iwo Jima. The Bison decals lay down really nice. Be careful with the setting solution, as they are rather sensitive to it.* ***45.** Weathering is accomplished using oil paints for washes and streaking and then Mig pigments. I use a mixture of Black Smoke, Volcanic Ash, and Dark Mud to simulate the black volcanic soil on Iwo Jima.* ***46.** The armament configuration you see here, with one .50 cal and one .30 cal on the forward mounts with the round shields is seen on a few reference photos of Marine LVTs at Iwo Jima.* ***47.** There are a few last minute things I did to try to make my model match the reference photo. I rearrange some of the items on the shelves behind the machine guns and add the four jerry cans. The antenna port is capped and I make a mount on the inside of the cargo compartment.*

Steel. These work well, but the Track Wash takes a long time to dry for some reason—about two days.

I use Mig Pigments in moderation to simulate the volcanic soil on Iwo Jima: P023 Black Smoke, P033 Dark Mud and F063 Volcanic Ash.

The absolute last step is to go over the cleats on the tracks with the Prismacolor Metallic Silver pencil.

Now that I've told my story, I'm going to provide some suggestions that may make life easier on this kit. 1. Build up the hull tub first by doing steps six through nine, then 18 and 19, leaving the driver compartment details off. Then, skip ahead to step 21 and test fit the engine compartment parts and attach the rear panel D1. Next, assemble the driver's compartment roof in step 22. Assembling the hull tub first will head off any fit problems with these large pieces off without other small parts getting in the way. Then, doubling back, finish the running gear, driver compartment details, etc.

2. In the driver's compartment, leaving the floor plate (B43) separate makes painting a whole lot easier. 3. Leave all those grab handles, headlights and stuff that sticks out for the last minute. These parts are all delicate and they break off easily. I did manage to lose one part permanently (K29 on the interior left side) and had to re-attach those delicate hooks on the rear ramp more that once. 4. Hold off on building the armament until deciding what vehicle to depict.

The end

Whew. I had a lot to say on this one. To sum it up, this kit has a few problems but is otherwise an outstanding rendition of an outstanding vehicle. The suspension, interior, and beautiful armament shine. Others may have better luck with the decals.

Those tracks should be replaced with AF35226 from AFV Club. There is also a set from Friul for the Italeri kits that may also work. Keep in mind that both Voyager (PE35448) and ET Model already have some nice detail sets out. They just didn't arrive in time for this article.

—Jeff Kleinhenz

MMiR RECCE

AFV Club U.S. "Water Buffalo" LVT-4 (Early Version). Kit Number 35205. Suggested retail price $62.95. Kit graciously provided by the manufacturer.

Bison Decals USMC Amtracs. Item Number BD35037. Suggested Retail Price $9.00.

Archer Fine Transfers Assorted .50 cal, .30 cal, 25 Pdr and 37mm Box Stencils. Item number 77009. Suggested Retail Price $6.95. Item graciously provided by the manufacturer.

References

Stuart A History of the American Light Tank Volume 1. By R.P. Hunnicut, Presidio Press, 1992. ISBN0-89141-462-2 The "Amphibian Tanks and Tractors" chapter is an excellent reference for all U.S. Amtracs and Amtanks.

US Amtracs and Amphibians at War 1941-45. By Steven J Zaloga and George Balin, Concord Publications, 2000. ISBN 962-361-655-4. The collection of period photos in this book make this a great reference for details and paint. It covers both the Pacific and Europe.

Allied-Axis Issue 8. Ampersand Publishing, 2002. The "LVTs at the Front Article" by David Harper and Pat Stansell contains large format period pics and a walk around of an LVT (A)4 Amtank. Currently out of print.

Be my Valentine?

The first of many Mini-Art Valentines hits paper here

I'm not sure how many of you have purchased and built a MiniArt kit yet, but if you've been holding off, maybe this might be the kit that gets you to give them a try. This is my third MiniArt build and with each build, I continue to be impressed.

I've never been a big British Armor fan. No real reason—perhaps it is the fact that until a few years ago there was little subject matter to choose from in styrene. That has certainly changed thanks in part to MiniArt and AFV Club and there are now a string of interesting and complete releases.

Today's subject is the Valentine III, Mk II. If you are ever confused by the various manifestations of the Sherman, you may be (like me) a bit befuddled when trying to make sense of the British nomenclature scheme in general and the Valentine in particular. The MiniArt kit represents a Valentine III, Mk II. Like all vehicles, the Valentine evolved over its service life, but many times what distinguishes one Mark from another can be a bit obscure. To help me retain what distinguished one Mk from the next, I developed the following table with the help of Mr Dick Taylor, whose excellent book; "Valentine, British Infantry Tank Mk III, Valentine Part 1," published by Model Centrum Progres, is very useful during this build, offering a wealth of pictures of the Valentine in-action. While I'm at it let me also plug another great reference, "Valentine Tank Walk-Around," by David Doyle, published by Squadron Signal publications. A great photo reference of restored museum, and private collection Valentines with detail photographs tailor-made for the AFV modeler.

In the Mood!

The Valentine's history is unique to be sure. Unlike most articles of war that find their way into military service, the Valentine was a completely private venture of the Vickers-Armstrong company and its designer, Mr. Leslie Little.

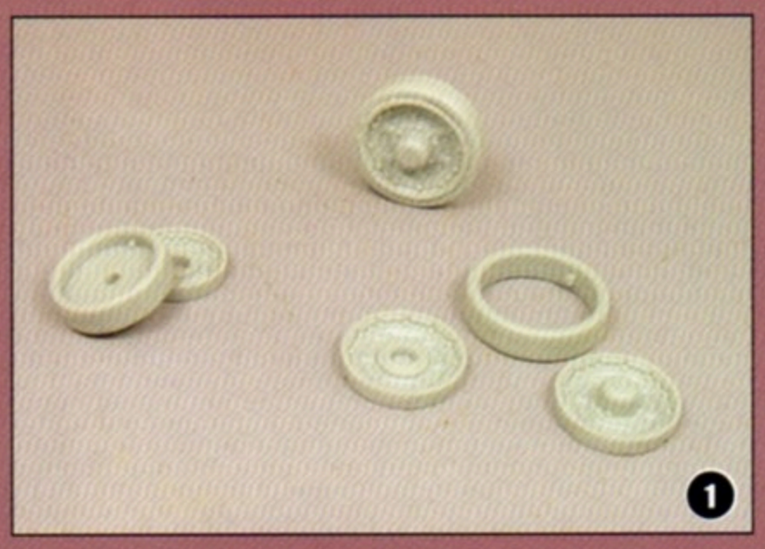
At that time—1938, they believed their "infantry" tank, which was smaller but more heavily armored than the competition at the time, the Matilda Cruiser tank, was the best choice for the job. By emphatically arguing with the British War Department to keep the vehicle weight below 16 tons, they could achieve the right balance of speed, protection and armament.

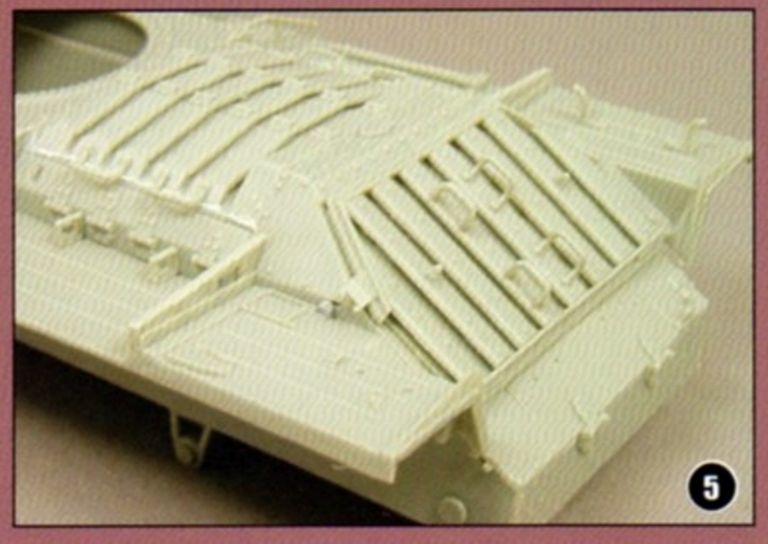
As war with Germany began to look unavoidable, the British war department relented on some of their requirements and ordered the first 100 Valentines. Production of all Valentine's took place between three facilities, Vickers, Metro-Camell or Birmingham Railway Carriage Company. The Valentine eventually became the most widely produced British Tank of WWII. Nearly 5,400 Valentines of all variants were produced and served in every major theater of the war.

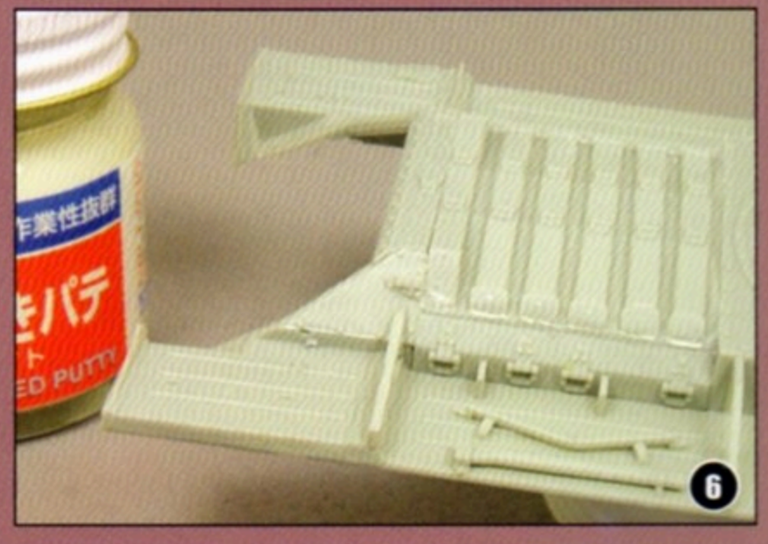
So, right... let's get cracking shall we?

I begin the build with the lower hull and running gear. The lower hull is nicely molded as a one piece tub to which you glue on the running gear bogie trucks, drive sprocket, idler and return rollers. The roadwheels are a three-piece assembly that includes the front and back of each wheel and a separate "tire." There are some minor sink marks on the wheel hubs and minor flash that require a little clean up. The front and back halves of the wheels are each cemented in place on either side of the tire, a small locating point is cast into each part to help things line up. Care should be taken so that you don't mistakenly glue two back's or two front's together. It can happen… I'm just sayin.'

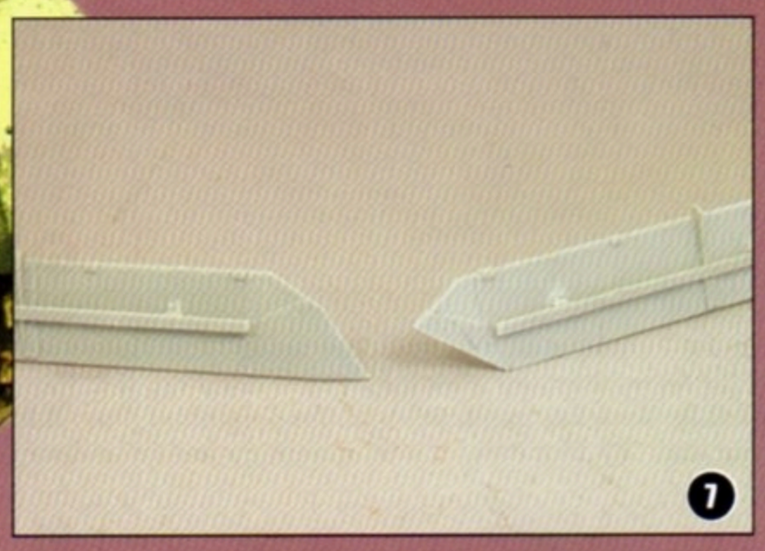
With the drama of the roadwheels behind me I move on to build the two drive sprockets and idlers. The idlers are nearly identical to the larger road-

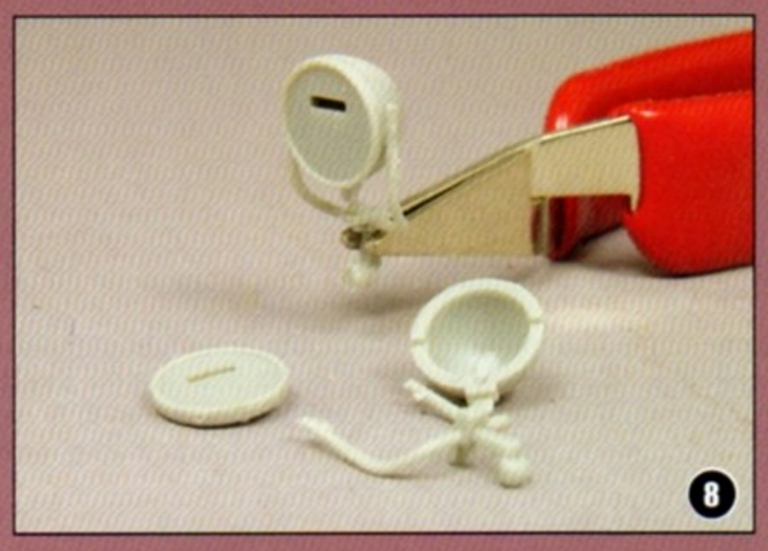


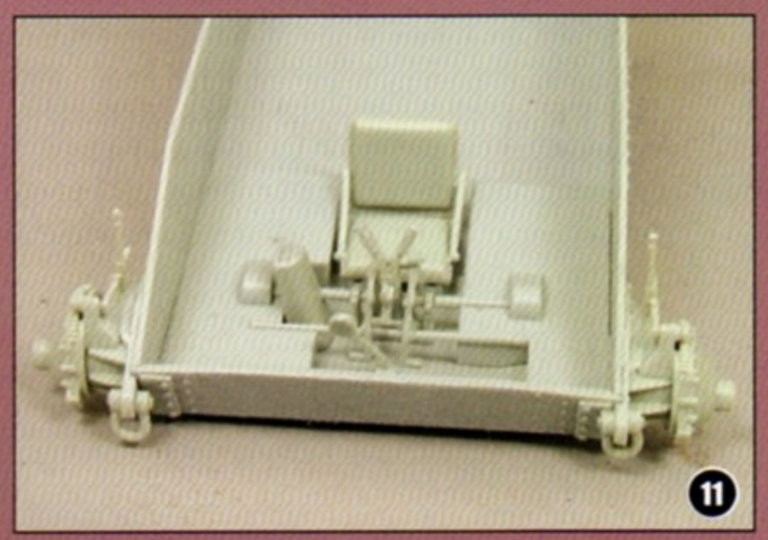


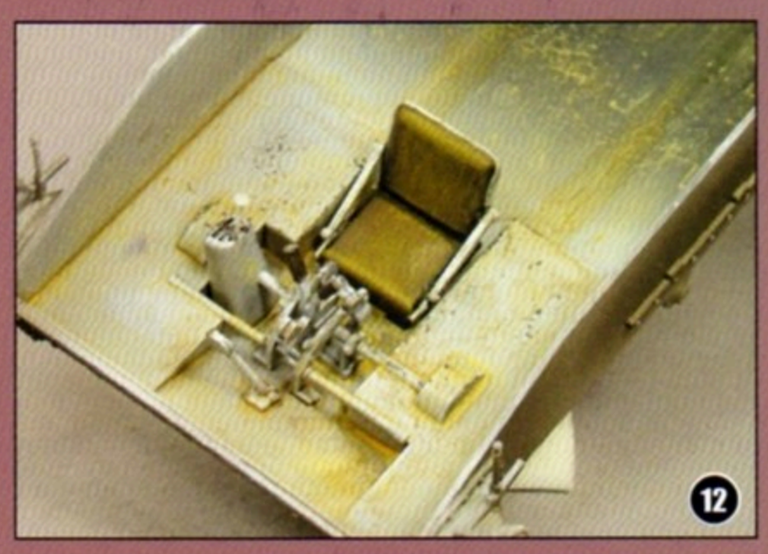


1. The basic roadwheel parts. 2. The drive sprockets and their bases. 3. The idler assembly is fairly complex. 4. The basic road wheel and suspension break down. 5. Beautiful detail on the engine doors. 6. There are minor gaps to fill in this area. Mr. Dissolved Putty does the job nicely, thank you. 7. The shields are cut down slightly for a proper fit. 8. The basic headlight assembly could use a bit of detail. 9. And so I did. Here is the headlight wiring wrapped in fine solder with a few extra pieced added from styrene. 10. Cast texture is added to the exterior surface of the turret using Mr. Surfacer. 11. A basic interior is provided for the driver's area, as well as the turret. 12. I do decide to paint and weather this area. I'll know it's there.





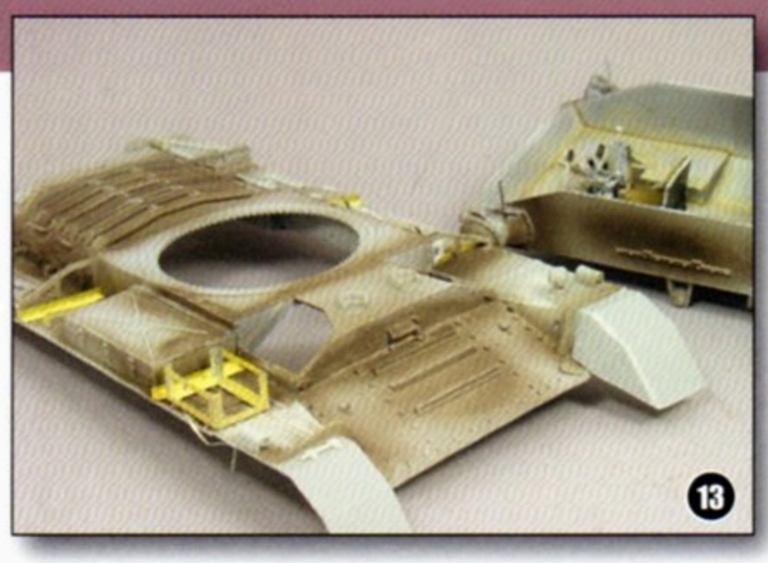


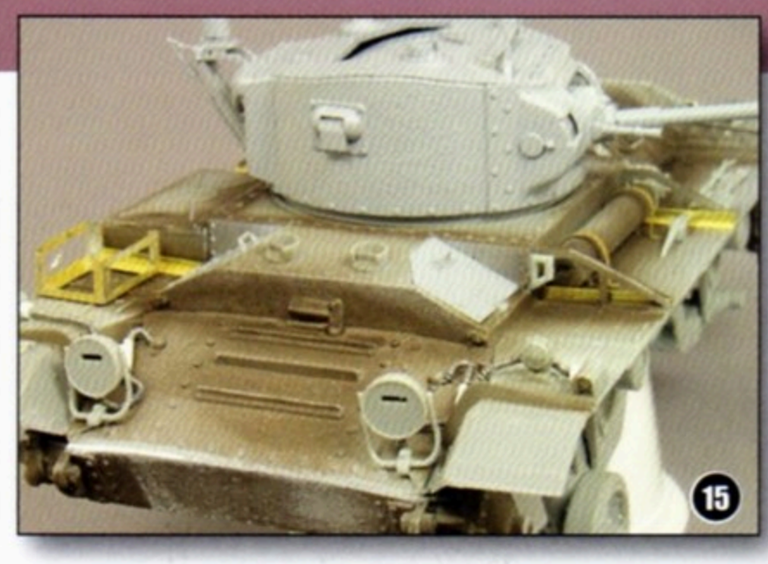


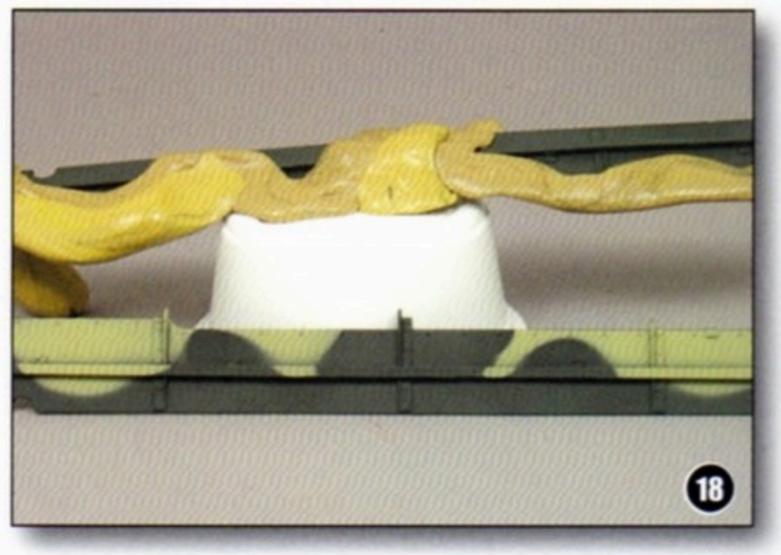
wheel so again be careful and make sure you have the correct outside wheel with the small detail on the hub. The idler mounts have some beautifully rendered bolt detail and the track tensioning rod is finely cast and extremely delicate! The drive sprockets are themselves, little gems. Each comprised of six parts, they build up quickly and easily with great details matching available references.

The main roadwheel bogie trucks too are nicely rendered, and each consists of five parts. I build up all four trucks quickly as they only require a little clean up, most of it required on the springs (part B46). The bogey trucks themselves are attached to the lower hull in an armored assembly (part B6), however I leave the bogies off to paint and weather them later. I set all the suspension and roadwheel parts aside in a small zip lock bag.

I now turn my attention to the upper hull. Overall fit is good. The rear engine access doors are very nice, however careful fitting is required to ensure there are no gaps along the bottom edge. As with many British Tanks of WWII, there is a lot going on with the upper hull. We have periscopes, crew hatches, headlights, stowage boxes and, oh yeah… that engine deck! Wow is that engine deck packed with details. The details are superb! MiniArt have gone all out to represent this very unique characteristic of the Valentine. The engine deck consists of two louvered doors on each, the left and right side of the engine compartment, which open up, and two more louvered doors at the rear, which each open out. Strewn about are all sorts of nice details like bolt heads and hinges that I can already see painted and encased in a layer of dust and dirt! I come back to reality when I realize I need to do a little clean up and some minor gap filling with some Gunze, Mr. Dissolved Putty. Allowed to harden over night, I complete the clean up the next day with some sand paper and a mist of Mr. Surfacer 1000 to make sure all traces of the filler is gone. I then attach the grab handles for all the doors and make my way around the rest of the upper hull. Nothing to be concerned about as I go around the upper hull, but I am careful, as some of the parts are very small. MiniArt provides a small but complete fret of photo-etch brass. The bulk of these parts are used around the upper hull, and include the spare track holder, fender joints, and stowage box frame, and are







13. *The upper lower hull assemblies ready to go together.* **14.** *Here, I'm checking for any fit problems before I pull the glue trigger.* **15.** *The top and bottom together at last.* **16.** *I start the finish with a pre-shade of dark green.* **17.** *I have always obtained great results with Silly Putty—so on it goes.* **18.** *Masking before and after on the side skirts, which are completed separately.* **19.** *I create a dark tan mixture using these Vallejo colors.* **20.** *Here are the results of the turret masking after the putty is removed.* **21.** *The two colors are unified to an extent by the spray application of Mig Grey Sand filter.* **22.** *A little oil paint fading makes my day.* **23.** *Hey baby, it's the desert, ya just gotta have*

attached with a tiny drop of CA glue applied with a thin length of wire.

One caution: as you add the fender support arms (parts C27, 31 32, and 39) be sure you check their alignment with the mounting points of the sand skirts. The location points of some of these support arms are a little vague on the instructions, and could result in the support arm not aligning with the sand skirt attachment point… again this "could" happen… I'm just sayin.'

You, light up my life, headlights that is…

The headlights on the Valentine are a prominent feature of the front of the vehicle. MiniArt does a reasonably good job on these and pull off some impressive injection molding to create each headlight frame. That said, they simplify the external wiring going to each light. Since this is so prominent on the real tank, I have to make some improvements. I start my removing the cast in wiring detail from both sides of the glacis. Using Mr Doyle's excellent walk-around reference, I make my own headlight wires from .20 brass wire wrapped in fine solder. I scratch build the tine T-shaped junctions with styrene rod, sheet, and my Waldron Punch and die. The styrene rod is glued into T-shapes. Once the joint is dry and strong, a small disk is glued to both sides of the "T." I drill out the ends of the rods to later accept the brass wire. Another small hole is drilled into the backs of each headlamp to accept the wire. Now it becomes a matter of measuring and some frequent test fitting of the wiring between the headlamps, left and right outside marker lights and where the wire emerges from the tanks interior. No big deal really, and after about an hour and a half, I have my new headlights all wired up! Now all I need to do is make sure I don't break them off while I finish the painting and weathering!

Spin me right 'round baby… turning my sights to the turret

All but the Mk III and V, which received the larger three-man turret, shared the small two-man turret of the Mk II.

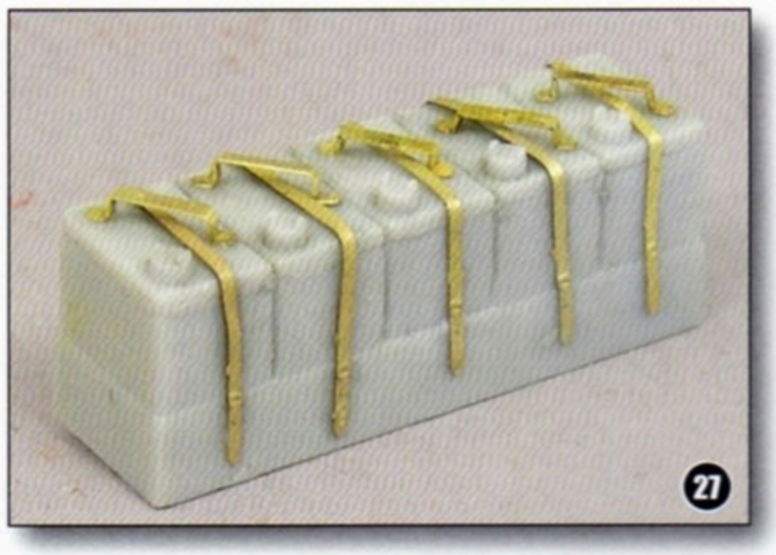
While MiniArt's Mk II turret is excellent in capturing the look and lines of the small turret, it's greatest failing is the lack of the heavy cast texture of the original. However, the interior is relatively complete with a good representation of the 2-pounder breech, BESA machine gun and radios. I use care when removing some of the parts as they're quite delicate and some are extremely small. The 2-pounder barrel is plastic and cast in two halves, so there's a little work to be done to remove the resulting joint seam.

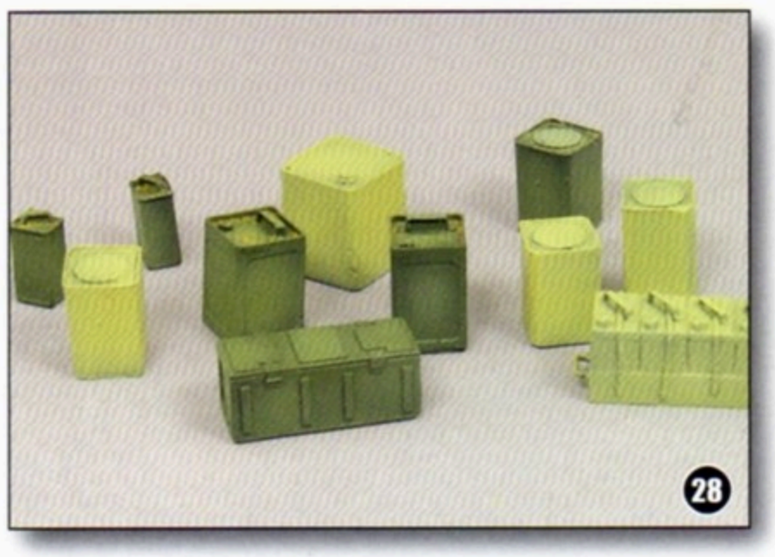
The turret itself is cast in two halves with a separate roof. The 2 pounder gun assembly is trapped between the two halves and can elevate up and down once in position. The joint between the two halves of the turret requires some minor filler and sanding to eliminate. Rather than use the photo-etched bolts for the turret ring supplied by MiniArt (I hate these little things!), I make some from styrene hex-rod that I "salami-slice" and glue in place.

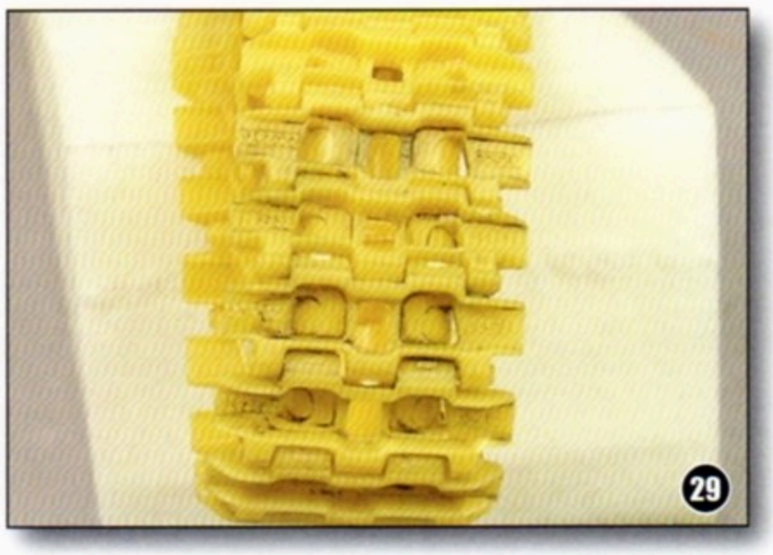
Once all this is dry, I begin to add in the missing cast texture. Starting with Gunze Mr. Surfacer 1000, I liberally stipple on a coat with a utility brush, gradually building up the texture. Once I'm just about where I want it to be I switch to Mr. Surfacer 500 and apply a heavier coat of the thicker 500 in random spots around the sides and bustle. This brings out the three dimensional effect I am looking for. To save time, I attach the roof details while the Mr. Surfacer is drying, but leave off the hatch doors to paint separately. While I add the small brass plate (photo-etched part 8, not 9) to the roof for the "Lakeman" Bren machine gun mount, I don't add the Lakeman mount or the Bren gun itself. Most photos of Valentines in action don't show the gun. Another note of caution, the small aiming vain on the turret roof is very finely cast and is easily broken off… it could happen… I'm just sayin.'

I also add the radio aerial mount to the back of the turret bustle. I now add an aerial made from a length of .20 brass wire with a pennant made from lead foil.

I pre-shade the turret interior with flat black and quickly dry it under a blow dryer before giving everything a coat of hairspray. My intent is to gently distress







'em—initial chipping complete. **24.** *A few pin washes applied in and around the most tempting bits of the suspension.* **25.** *Adding rust to muffler shroud by the patented Tom Jett method (not really).* **26.** *You can never be too rich, too thin, or have too many filters. Using the Mig DAK Filter set.* **27.** *MiniArt's single piece fuel cans and the attendant photo-etch straps.* **28.** *All the various stowage painted and ready for weathering.* **29.** *Bronco's tricky replacement track. Oh no, they didn't. Yes, they did. There are casting numbers in there.* **30.** *The previously primed track gets distressed by LifeColor.*

the interior. With the hairspray dry I shoot a coat of Tamiya white mixed with a couple drops of Tamiya Dark Yellow. Another blast from the warm hair dryer and I'm chipping the interior areas most prone to wear.

I add the completed turret roof, set it aside and get ready to paint. Don't worry there should be a "lip" around the top of the turret, where the roof meets the walls. Checking my references, I feel better and move on.

On the inside...

I return to the lower hull and take care of the driver's compartment. MiniArt provides a decent driver's interior but nothing else. The detail of the controls is very good and many of the parts are again quite delicate. I build up the driver's seat, various control levers and two control panels and shoot the entire interior in flat black, then once dry I spray a light coat of hairspray over the black to facilitate chipping later on. Now, I shoot the entire driver's compartment in the same Tamiya White and Dark Yellow mixture I'd used for the turret interior but leave the area aft of the driver's seat in flat black to make the empty interior less noticeable through one of the opened drivers hatches. A short blast under the hair dryer and I move on to chipping the white interior color. I use a lot of restraint here, as it's easy to go overboard. After I'm satisfied with the distressed paint, I apply a wash of Mig Neutral and Dark Washes to help the raised details pop. After that is dry (again with the help of the hair dryer) I apply a very thin wash of Mig Abteilung Oil, Buff and Wash Brown, heavily thinned with odorless Turpenoid. Once the final dust wash is dry, I apply a light dusting with a mixture of Mig's Gulf War Sand, and Basic Earth pigments. This gives me the correct lived in look I am looking for. No decals are provided for the driver's instrumentation, and since I don't have any spare Archer dials to use, I leave them in flat black figuring they're difficult to see anyway.

Now the upper and lower hulls are ready to join together. I carefully thread the track adjustment pins from the idler mounts through the small holes in the upper hull and dry fit everything before reaching for the Tamiya thin cement. I wrap a few rubber bands for and aft to keep everything in place while I dap on the cement and let capillary action pull it along the join line. I set everything aside to set up.

Now that the upper and lower hulls are together I notice that there is a small gap where the front hull wall meets the front edge of the glacis. I fill this in carefully with a short length of wire dipped in the Mr. Dissolved putty. The trick is to just get it where it's needed to save time and effort sanding any excess out, cause this stuff dries HARD!

I make sure all the filler has been removed and all the blemishes have been addressed; now it's time to get to the fun part and arguably the most time consuming part of the build, painting and weathering.

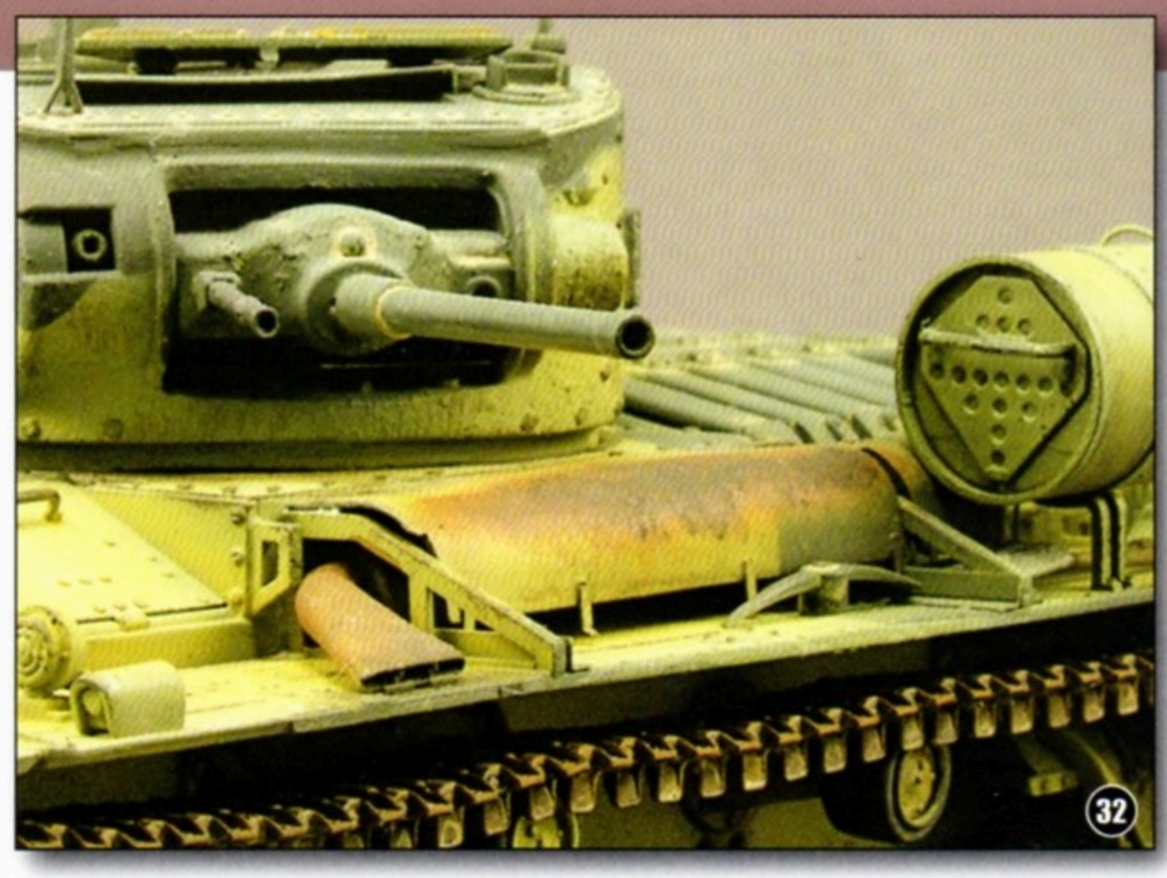
Button her up and grab the Silly-Putty!

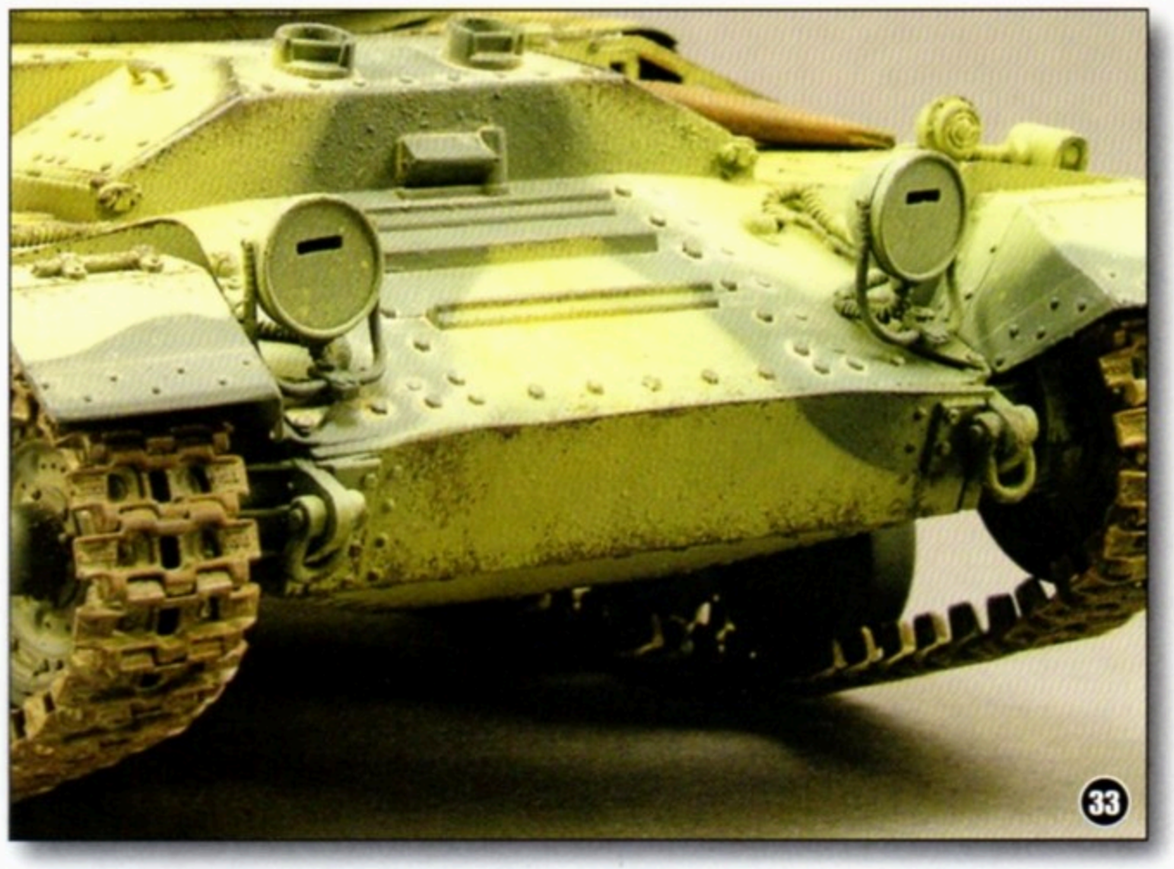
The first step in the process is to give everything a pre-shade and since much of the vehicle would be a black-green color anyway, I use Vallejo Model Air #71018, Black Green. This color seems a good match for the vehicle I'm modeling, which is shown in one of the color plates in the Model Centrum book.

Another blast under the hair dryer and I'm moving on to the next step, masking and painting.

I've become a believer in using Silly-Putty to do complex masking for these sorts of schemes. The putty is easily worked, can create a feathered or hard edge and comes off relatively easily without any harm to surface. With my references within eyeshot, I form a long thin snake of putty and apply it over the black-green pre-shade in the shape of line I want to achieve between the black-green and desert yellow. Since I haven't attached the sand shields at this point, I mask them off with another snake of putty and paint them separately, but position the putty to ensure the line will match up, when the shields are mounted back on the tank. You may want to add the shields first, I'm just sayin.'

Since I haven't done a lot of British armor, I don't have a pre-mixed shade of British desert yellow, so I'm left to my own devices to concoct one using Vallejo Model Air colors. So, I mix up a batch using Camo Medium Brown #71038, White #71001, Dark Yellow, #71025 and USA Grey, #71045. I don't





***31**. Mig Dark and Neutral Wash is applied in and around the wheel details. Once the wash is dry, pigments impart a little dusty texture. **32**. The LifeColor rust combo provides a most excellent result! **33**. The Mig Dark and Neutral Wash mixture is also used to pick out and create some streaks from the lower hull details like bolt heads. **34**. The tracks are painted in a dark mixture of Tamiya Hull Red, and NATO Black thinned with Tamiya Lacquer thinner and weathered with the LifeColor "Dust and Rust" set. **35**. The rivet detail on the turret lends itself well to a wash effect. There is quite a bit of interior detail in there, unfortunately, it doesn't photograph very well.*

have a precise formula to use; instead I experiment with the mixture until I get the color close to those in the color plates I am using as a reference.

With the color right, and the Silly-Putty mask in place, I begin applying light coats of dark yellow inside the masked areas. I make my way around the hull and turret gradually building up the color with each pass. To create some depth, I leave a little of the preshade showing through the dark yellow, particularly on the flat panels and in the various nooks and crannies.

After about 10 minutes, I gently remove the Silly-Putty mask exposing a nice sharp edge between the Back Green and Dark Yellow. After drying everything quickly under the blow dryer, I spray a filter of Mig Ochre for Grey Sand over the entire tank and let it dry. The filter immediately warms everything up and brings the tones together.

The painted desert

It's now time to distress and weather my Valentine. Over the last couple years, I've slowly accumulated a nice assortment of Mig weathering products. The arsenal includes pigment powders, washes, filters, and Abteilung oils. They have proven themselves to be a good investment in my painting regime. If acquired a little at a time, they don't require the selling of a body part or a second mortgage.

I start with a little oil paint fading. This technique has been well documented already, but in short I apply random dots of "Industrial Earth and Faded Grey" oil over both the dark yellow and the green. These dots are then worked into the paint scheme in with vertical strokes of a brush wet with mineral spirits. If you haven't tried this before, give it a whirl, but take your time and don't get ahead of yourself. Once you've gone all around the model, let everything dry overnight to see how things are looking.

Since this is a desert war vehicle, it has to have chips, sorry non-chip-lovers. I use restraint, but break out my Vallejo German Camo Black Brown (70822). Using a small piece of sponge foam, I work my way around the tank again, focusing on raised details and areas that would have seen a lot of wear.

Satisfied with the fading and chips, I move on to a dusty wash. I had hoped to try the new AK Interactive Africa Dust set, but they are not available in time for me to complete this project. Instead I make a heavily thinned wash using Abteilung "Buff " and a little Wash Brown. Working with triple-o brush, and carefully applying a dot to all the raised details and in general anywhere I

Mark	Turret	Gun	Engine	Other Characteristics	Country of Production
I	2-Man	2-Pounder	AEC Petrol	Coax BESA	Great Britain
II	2-Man	2-Pounder	AEC Deisel	Coax BESA	Great Britain
III	3-Man	2-Pounder	AEC Deisel	Coax BESA	Great Britain
IV	2-Man	2-Pounder	GMC Deisel	Coax BESA	Great Britain
V	3-Man	2-Pounder	GMC Deisel	Coax BESA	Great Britain
VI	2-Man	2-Pounder	GMC Deisel	Coax BESA	Canada
VII	2-Man	2-Pounder	GMC Deisel	Browning Coax	Canada
VIII	NONE BUILT				
IX	2-Man	6-Pounder	GMC Deisel	No Coax	Great Britain
X	2-Man	6-Pounder	GMC Deisel	Coax BESA	Great Britain
XI	2-Man	75mm	GMC Deisel	Coax BESA	Great Britain

think the dust would naturally settle into. The effect really makes all that tasty upper hull and turret detail pop! Make sure to unload the brush on a napkin before moving to the model; this enables me to control the amount of paint flowing onto the surface.

After a night to dry, I move apply another wash, this time to the running gear and wheels. I mix up some Mig Dark and Neutral Wash and apply this in and around the wheel details. Once the wash is dry, I move over to pigments, to impart a little dusty texture. These are applied wet, and dried under a hair dryer. Once dry, I get our some Mig Dark wash and pick out some of the hubs and raised wheel details. This same mixture is also used to pick out and create some streaks from the lower hull details like bolt heads.

Tracks of my tears

Tears of joy that is…The kit tracks supplied in the kit are very nice, and are the link to link variety but having heard of a new set however from Bronco for the Valentine that are designed to be functional, I asked for and receive a set from the editor to use for the kit. In a word, the bronco tracks are "beautiful." They're molded in a daisy chain and cleanly clip come off the sprue with nippers, requiring some minimal clean up of each link. Each link is designed with small, "nipples" (did I just use the word nipples in an armor modeling article?) that snap into corresponding indentations on the link it joins to. Assembly is not a "snap," pardon the pun. The nipples are fragile (well, aren't they all), and can break off easily. OUCH! After some gentle manipulation I am able to coax my nipples into place, and generally got two sets of fragile but functional track runs. If you're like me, nipple manipulation really never gets old and can't be practiced enough. Or words to that effect...

Each track run is painted in a dark mixture of Tamiya Hull Red, and NATO Black thinned with Tamiya Lacquer thinner. This is sprayed over the track and allowed to dry thoroughly. Next came the LifeColor "Dust and Rust" set. These are applied with a small piece of sponge in the order directed. Happy with the rusty look, I move to the next to last step and grab the dusty wash I'd used earlier on the raised details, and now with that same thin wash onto both sides of the track making sure in gets into each track face. It takes two or three applications of the wash until I'm happy. Now all that is left to do is "polish" the guide horns, some of the track faces and the drive sprocket teeth with a graphite pencil. The track is gently placed around the running gear, and the joining links (on the bottom run) glued together.

That's a wrap!

This is a Valentine I won't soon forget. MiniArt has got a winner here and there are several versions announced our already available. MiniArt will have company too, with AFV Club announcing a Valentine, and Bronco releasing an Archer!

—Tom Jett

MMiR RECCE

MiniArt Valentine II, Mk. III, Kit # 35096. Suggested Retail $48.00. Kit graciously provided by the manufacturer.

Bronco Valentine Infantry Tanks Workable Track, Kit #AB3536. Suggested retail $18.00. Kit graciously provided by the manufacturer.

References

Squadron Signal books, *Valentine Tank, Walk-Around*, by David Doyle

Progress Publishing, *British Infantry Tank Mk III*, Valentine, by Dick Taylor

Making it at Factory 112

The AFV Club T-34-76 Model 1942

The history...

One of six factories contributing to the production of T-34's during the Second World War, Krasnoye Sormovo, or Factory 112, played a significant role in the manufacture and development of one of the most successful tanks of the period.

Originally a shipbuilding factory located in the Sormovsky City District of Nizhny Novgorod (Gorky), Factory 112 produced nearly 13,000 T-34s from 1941 through 1945. That number, roughly 20-percent of the total of nearly 65,000 T-34s built during that span, is quite unofficial as hundreds of tanks went through rebuild processes at the facility and may very well have been counted numerous times. In the first year of production, Factory 112 sent just 161 T-34s out the door. However, as production ramped-up the following year, over 2,700 tanks were built. Production peaked in 1944 with some reports claiming 3,619 T-34s were completed at the facility.

As with most Soviet tank factories, each laid claim to a unique and distinct set of characteristics for their vehicles. Road wheel and turret configuration, external fuel storage, and in some cases, even the fashion in which armor plates were assembled were dependant upon the regional availability of resources such as steel, rubber and labor. All played a part in the physical make-up of the T-34, and Factory 112 was no different. Those points specific to a Krasnoye Sormovo-built T-34, such as interlocking armor plate and rubber-rimmed road wheels, will be discussed in detail throughout the course of this article.

Enough history, let's talk models.

The kit

The subject of this build is AFV Club's 1/35 scale replica of a T-34-76 Model 1942 from Factory 112. Listed as kit number AF35S51, the kit contains 474 parts, six of which are clear and allow the modeler an opportunity to show off an impressive and nearly complete interior. A nice 16-page instruction booklet will help the modeler wade through the multitude of parts. This is a full-fledged multi-media kit. A brass gun tube simulating the 7.62cm F34 main gun, a small fret of etched brass, one-piece vinyl tracks, a length of string for a tow rope, and 10 metal springs used to help simulate the tank's Christie suspension are also included.

As an option for those who are interested in a more conventional kit without the clear hull and turret parts, AFV Club has also released the Model 1942 Factory 112 under kit number 35143.

This kit is marketed as a late 1942 production model. However, it shares many features with vehicles produced nearly a year later. This was not uncommon for the Soviet war machine where significant overlaps in production cycles occurred. Details like the deflector strips on the forward upper hull, the glacis plate-mounted headlamp, the rear external fuel cells, the armored bow machine gun sleeve and the wealth of handrails welded to the exterior are all indicative of a summer 1942-built T-34. But, the deflector strip welded in front of the driver's hatch and antenna are changes reported to have been made during the fall/winter production schedules.

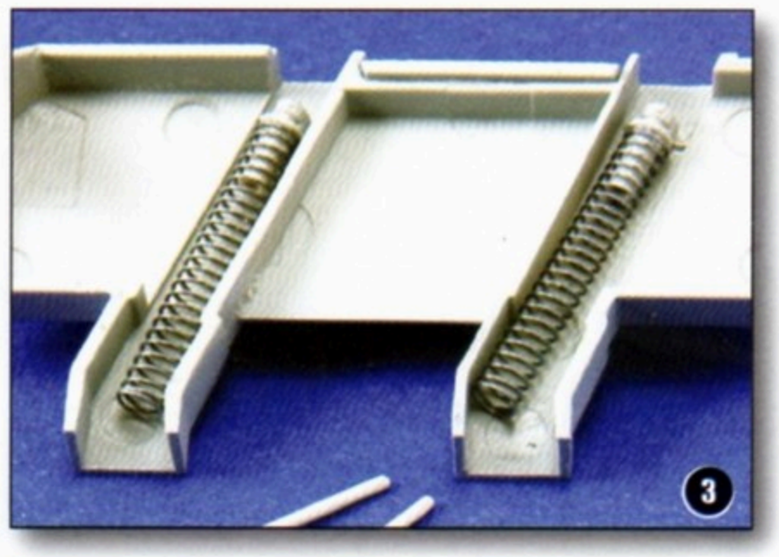
Once the shock of seeing oodles of interior and exterior goodies wore off, it is back to the build... and back to reality.

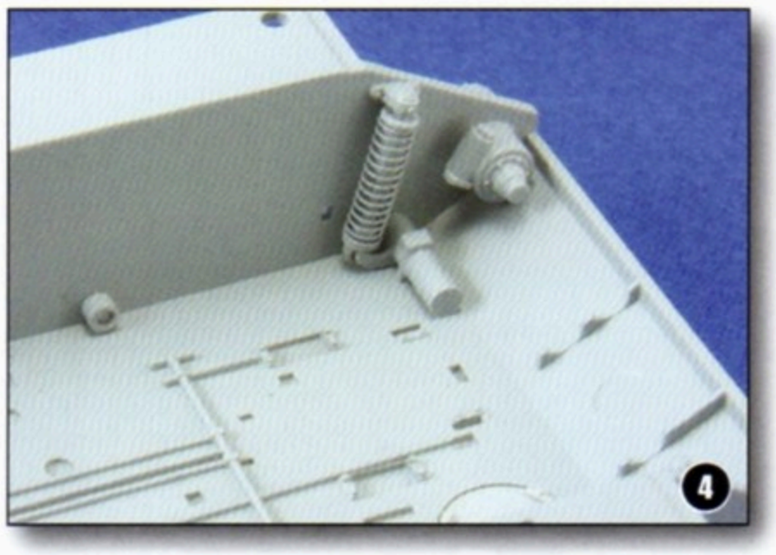
The build

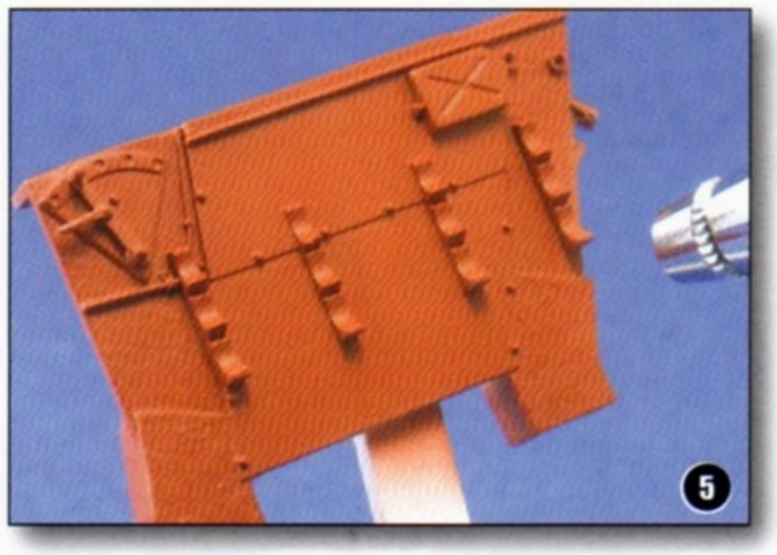
I broke tradition on this model and instead of getting the suspension built early on I choose to concentrate on the hull interior. Now, this is where the first of several major bones to pick with this model occurred. The see-through hull and turret parts may appear an interesting feature initially, but in this case, many edges appear less-than sharp, details are not well defined, and each expanse of armor plate seems to suffer from noticeable undulations. All are potential distractions from what I feel is a pretty decent kit. To deal with my lifelong aversion to clear parts, I hurry to simulate the steel texture inside and out by stippling on a thin layer of Mr. Surfacer 500, followed by a quick shot of Mr. Surfacer 1000 from a can.

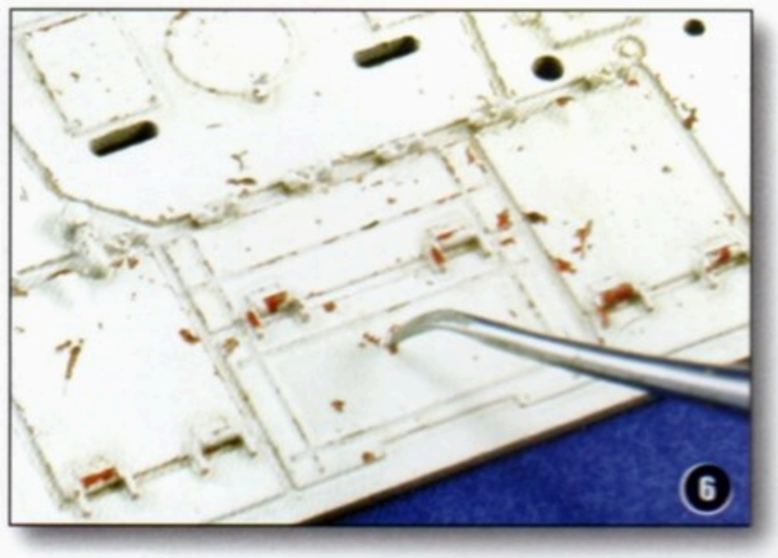
AFV Club choose to offer a working suspension of sorts by including metal springs to replicate the large steel coils found on the original. However, the kit springs suffer from a lack of heft, looking more like something obtained from a ball-point pen. While I applaud the intent, I question the decision. These springs do complicate what could have been a simple and efficient assembly of the running gear. The running gear proves fiddley and quite unreliable. I follow the instructions closely, and still wind up gluing the road wheel idler arms solidly in place.

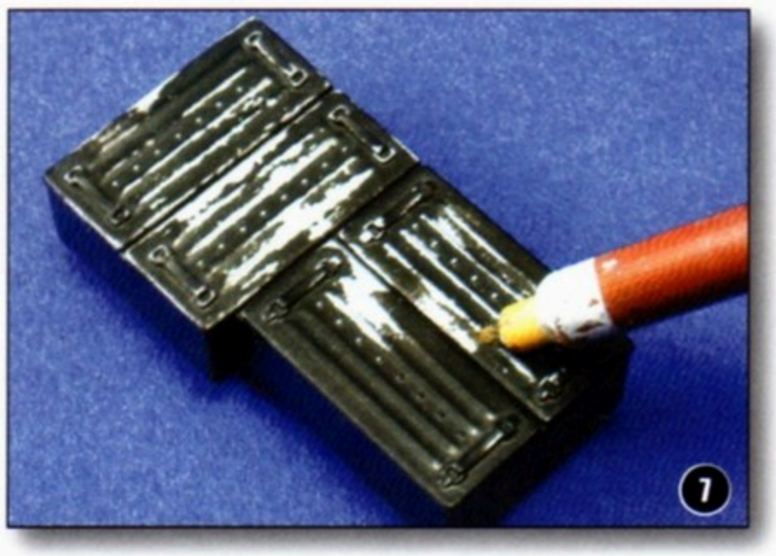
Turning my attention back to the internal details, I prime and paint the major structural details such as

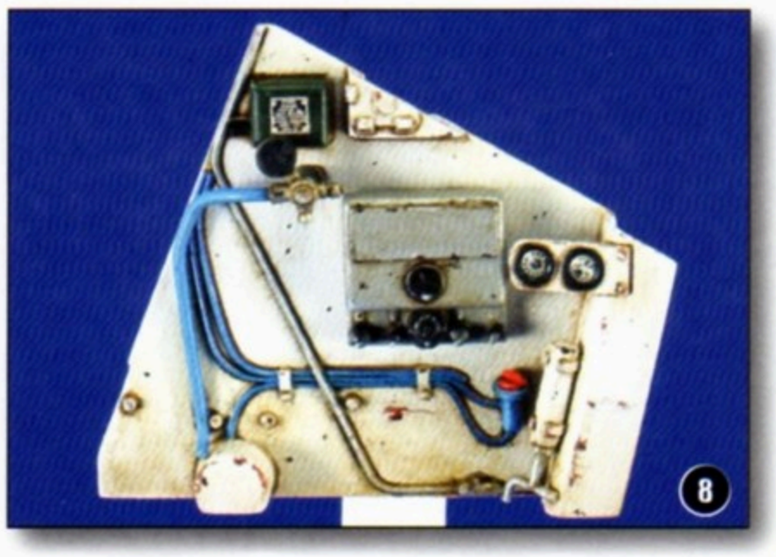












***1.** Mr. Surfacer 500 is used to simulate the various steel textures.* ***2.** Mr. Surfacer 1000 gives a smooth and neutral finish to the model before the painting stage.* ***3.** Metal springs are provided to simulate the Christie-type suspension coils.* ***4.** The metal springs in place in the forward hull.* ***5.** Vallejo Model Color 70982 Cavalry Brown is a good match for red-lead primer.* ***6.** A scriber is used to replicate chips and scratches on the firewall.* ***7.** Using the hairspray technique, a brush removes bits of paint on ammo boxes.* ***8.** The driver's sidewall after the weathering stage.* ***9.** The right sidewall complete with a nicely rendered 9R radio set.*

the four sidewall modules (A, B, C, and D), the firewall (C-1), and both forward hull panels (C-38 and D-23). These are first textured, then given a smooth application of Vallejo Model Color 70982, Cavalry Brown. A generous dousing of Tres Semme Extra Hold hairspray follows, in preparation for a little chip and scratch action.

The interior and appropriate details are then airbrushed Tamiya XF-2 Flat White. When dry to the touch, I pick away small scrapes, gouges and rubs using a scriber and paint brush moistened with tap water.

The remainder of the fighting and driver's compartment is painted according to my references. Dark grey, light blue, black, aluminum, silver and red Vallejo colors are employed judiciously around the interior. I also grab a few acetate dials I had in my spares box and throw those into the instrument bezels. Archer Fine Transfers supplies some really cool data placards, several of which I strategically place in the driver's compartment.

Despite omitting the electrical connection that runs from the hull floor to the turret, AFV Club did an admirable job with the fighting compartment. One aspect that I find a pleasant surprise is the main gun ammo ready racks. There, the manufacturer provides the ammo as half shells (D-52) to be painted, and then glued into the bins (D-9). This method provides a slick and clean assembly. I paint the rounds black, with red stripe and steel nose cap and the cartridge cases a 1:1 blend of Vallejo Model Color Brass 70801 and Gold 71066.

The main round ammo boxes D-20, 21 were also given the hairspray treatment after first being painted Citadel Colour 61-56, Chainmail, followed by Tamiya XF-1, Flat Black. After a few minutes I used a stiff brush and water to beginning exposing the metallic undercoat.

One complaint I have with the kit throughout is a somewhat inconsistent molding effort. Many parts require an inordinate amount of cleanup due to this, including portions of the Type 9R radio set. In fact, part D44 is so mismatched that I discard the kit part in lieu of one I fashion from styrene strip and rod. It will not be the last time I am forced to replace a part on this kit.

Weathering the interior is accomplished using my usual cast of characters. I use artist's oils, specifically raw and dark umber, raw and burnt sienna, as well as yellow ochre. These are all reduced with Turpenoid. From the excellent MIG Productions 502 Abteilung range I use Wash Brown 080, Shadow Brown 015, as well as Basic Earth 093, Light Rust Brown 060 and Light Mud 125.

To simulate collected dust, dirt and grime on the interior, I use the following MIG Productions pigments: Dry Mud P232, Europe Dust P028, Dark Mud P033, Light Dust P027 and Light European Earth P415.

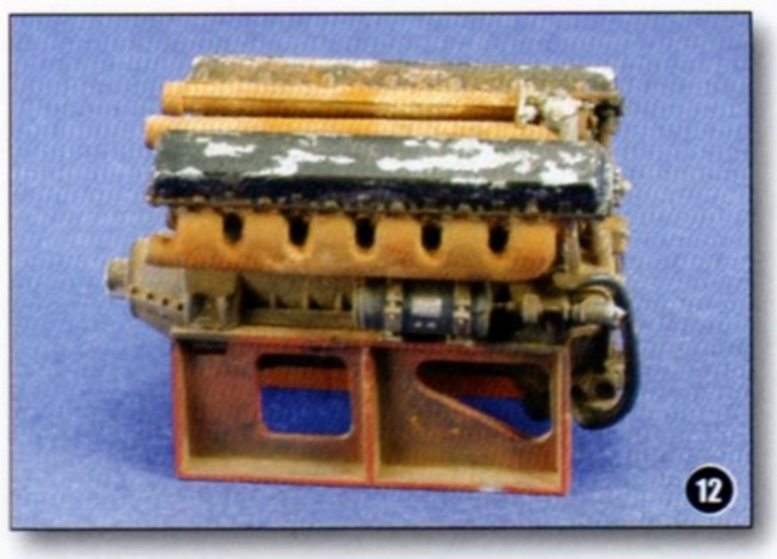
The engine compartment looks the part, with fuel and oil tanks, radiators, and air filters all wrapped around a very nicely rendered V-2 engine, main clutch and fan, and five-speed gear box. The massive engine is a cool 25-piece affair that is a bit of a challenge to build, but worth every minute once completed.

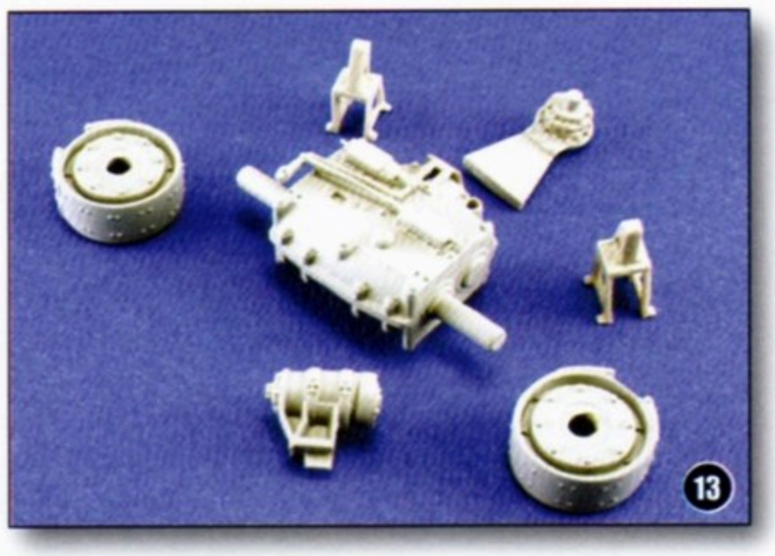
For some reason, AFV Club opts to have the modeler add both the round Pomon air cleaner and the VTI-3 "Cyclon" system. Given the production period, and the fact AFV Club integrated the exhaust pipes onto the filter cans, you should ignore parts A14, 31 and 32 and stick with the more-prominent "Cyclon" filters.

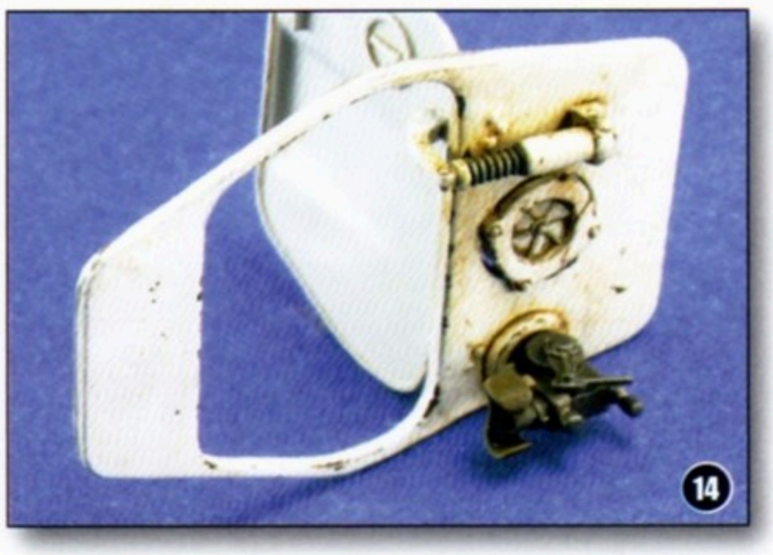
The four-piece clutch and fan assembly is a real gem. With a tremendous level of attention to detail, the parts are studded with rivet and bolt detail and even include petite molded-on lock wires. I did have fit issues when trying to marry the fan, gearbox and engine into the compartment, so a little fudging is necessary.

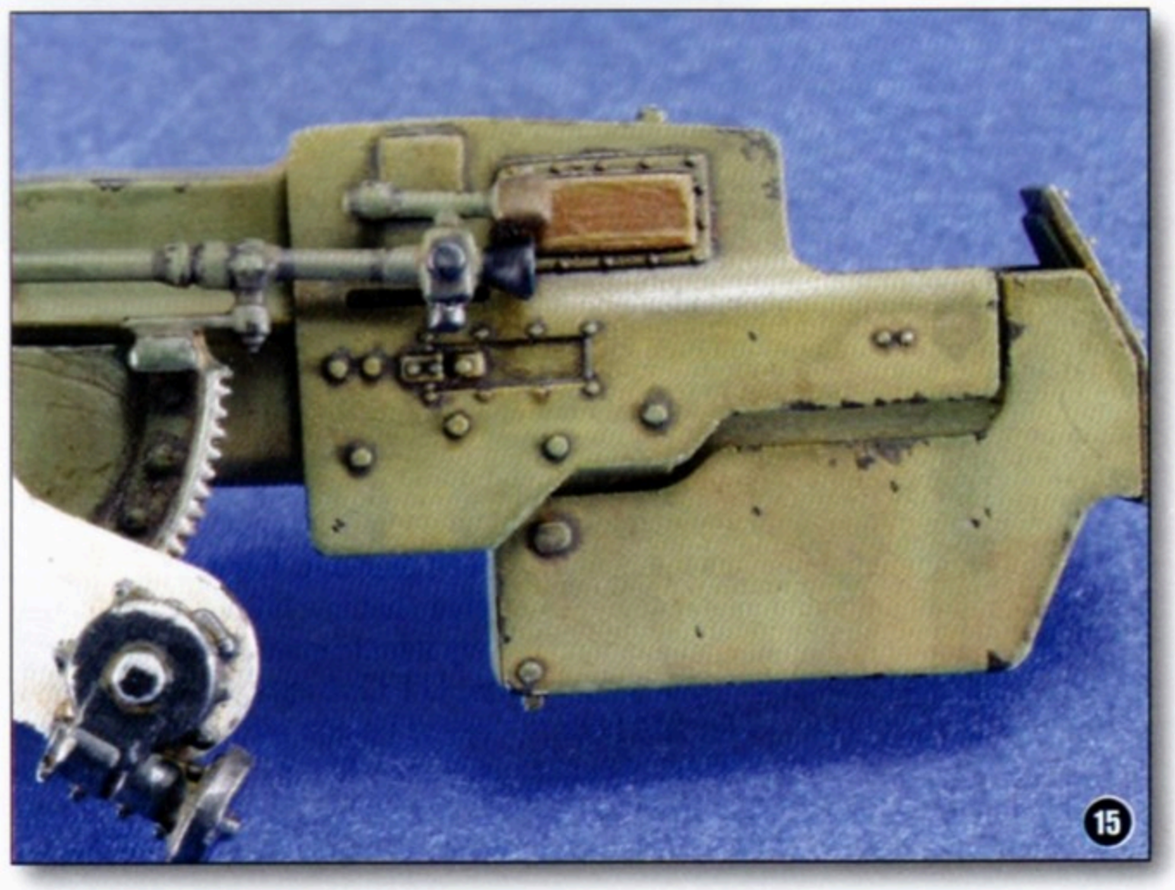
The brake assemblies come as two parts, but in reality they are single-width bands. I glue the parts together, fill and sand the seam, and replace the lost rivet details with .021-thou discs punched with my trusty Waldron set.

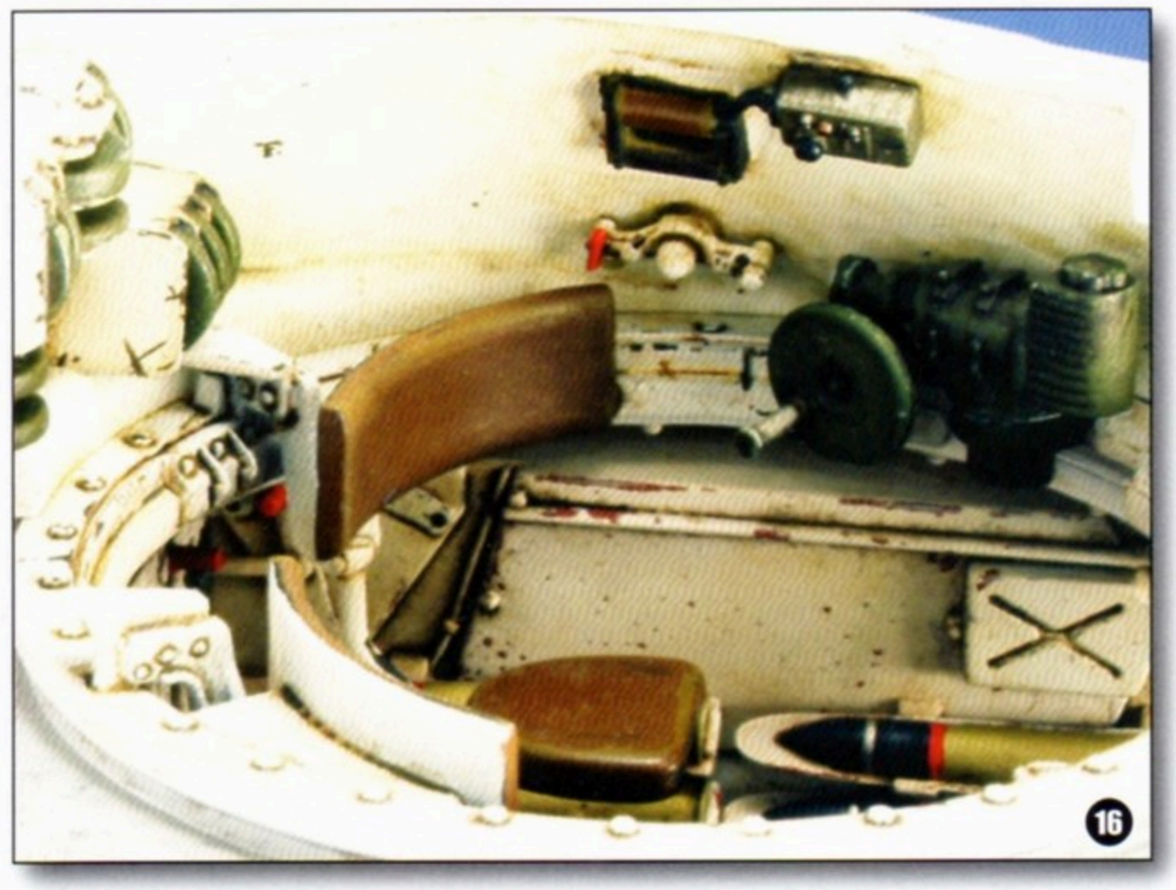
Building the turret creates its own set of issues. AFV Club did a decent job on the cast turret as far as details are concerned. Externally, everything that should be here is present, including the pistol ports, lift rings, roof-mounted air ventilator. But, the PT-7 gun armored sight cover looks a tad too tall to me.











***10**. Typically a filthy place, I use a full range of oils and pastels to weather the engine compartment. **11**. Nice tonal variations and realistic weathering can be accomplished used both artist's oils and pigments in concert. **12**. AFV Club does a credible job replicating the V-2 engine. **13**. The well-detailed five-speed transmission and brake assemblies primed and ready for paint. **14**. Even the roof interior of the T-34 is a cramped space. **15**. The 7.62cm F-34 main gun painted and ready for installation. **16**. Exhibiting a little less grime than the hull, the busy turret in a final weathering stage. **17**. Separate tires aid in painting the full-disc road wheels. **18**. Helping showoff the engine compartment, AFV Club offers the entire deck plate as a separate component. **19**. A little extra work is needed on the clamshell hatch. **20**. Spare track links, and photo-etch ice cleats are stacked on the right fender and await tie-down straps. **21-22**. This model exhibits my first attempts at color modulation. **23**. A fine brush, properly thinned paint and restraint are needed to realistically simulate chipping. **24**. Several applications of artist's oil washes are needed to create depth and character for the monochrome green finish.*

The large hatch is also well represented with the distinctive raised portion in the middle common to Factory 112 builds. However, the modeler must deal with three large ejector pin marks on the inner side of the hatch. The kit instructions also advise to use actuator (E-15), but that is only to be used with a closed hatch. The correct extended part for an open hatch is actually E-14, but no call out on the sheet is given.

The turret is a very cramped place, even with just a two-man crew. This fact is painfully obvious when building the interior. Taking up most of the room is the F-34 7.62cm main gun and its controls. AFV Club did a super job recreating this weapon. Ammo bins for the 7.62mm DT machine guns take up the entire rear of the turret. Oddly, the manufacturer provides the rear part of the coaxial machine gun, but not the barrel, so I source one from LionMarc.

A pair of clear vision blocks (H-3) are offered, each with a scalloped portion of the turret intended to fit into recesses in the turret side. Try as I did, I could not get these parts to fit flush, as per design. Therefore, I trim away the scalloped parts from around the clear block, fill the holes in the turret sides with epoxy putty and glue the blocks on.

The turret interior is textured, painted and weathered in the same fashion as the hull. The main gun is painted with Lifecolor UA002 FS34102 Green. This gives it a chalky olive color, which to my eye is a perfect base for Soviet Protective Green 4BO.

It was here I experienced a major letdown. When I try to capture the gun between the turret halves I cannot get the gap to close. Whether because of the kits' design, or my own fumbling, it just is not going

to happen. After reciting many words I usually reserve for the golf course, I wind up cutting away the trunnion locator pins. This allows the gun to float freely, then I glue the gun mantlet (E-29) in place from the outside of the turret.

Foundry numbers are common, if not standard, on Factory 112 turrets. I shaved a few numerals from old sprue and glue them onto the appropriate locations on each side. Afterward, the turret exterior is finished with a fairly thick of slathering of Mr. Surfacer 500 neat from the jar. Simulating the cast finish, I stipple, brush and stab the surface to create the irregular texture.

A unique feature of Factory 112-built vehicles is most, if not nearly all were produced with rubber-tired road wheels. With either the -76 or the later-produced -85 versions, rubber did not seem to be a shortage item for the factory over the duration of the war. I build the road wheels next, and again it is a case of one-step forward, then one step back. AFV Club offers the rubber tires as separate parts (W-1) of the full-disc road wheel. And these slip on beautifully, with no cement needed. However, as I choose to glue mine in place with Tamiya Extra Thin cement as a precautionary measure, several tires develop significant cracks across their widths. I am assuming there is just enough stress on the part that the

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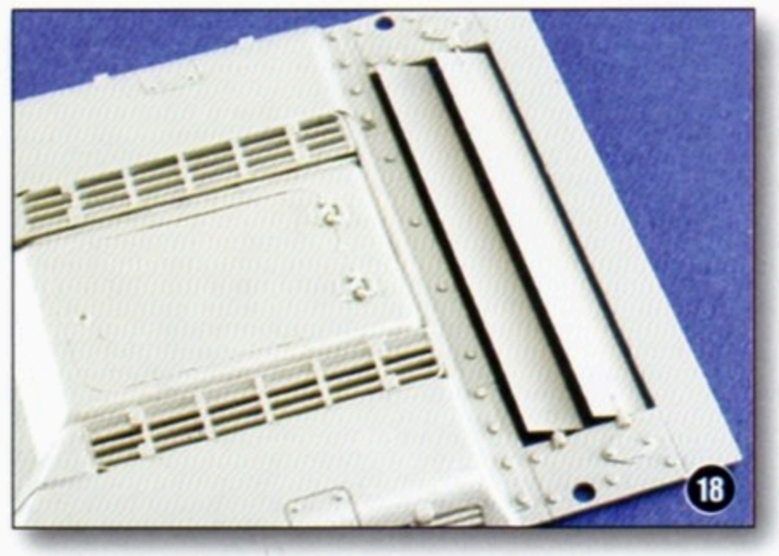
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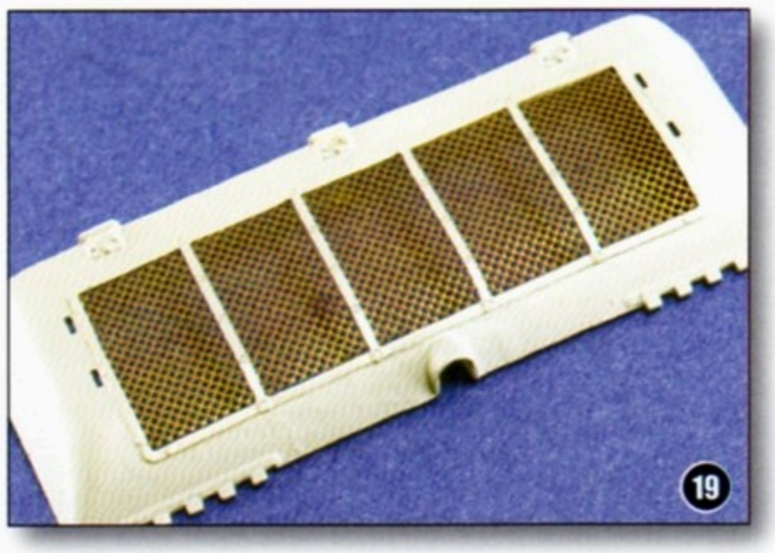
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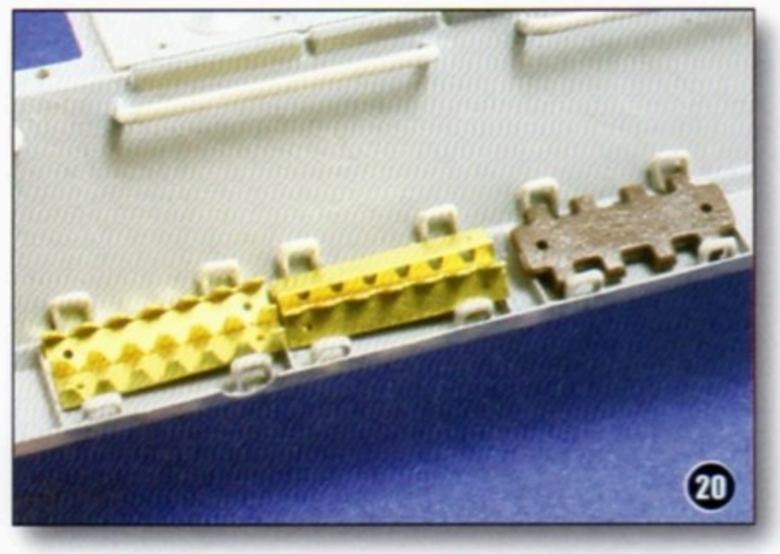
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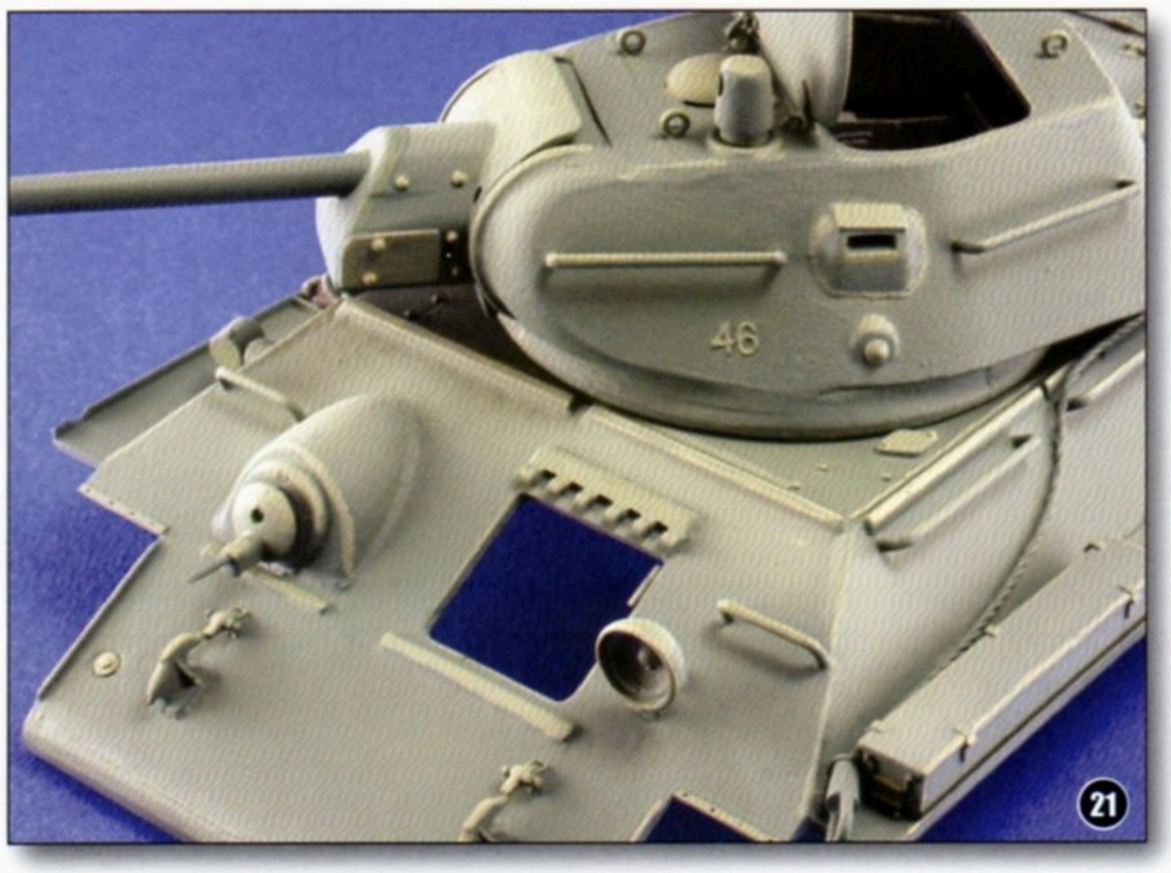
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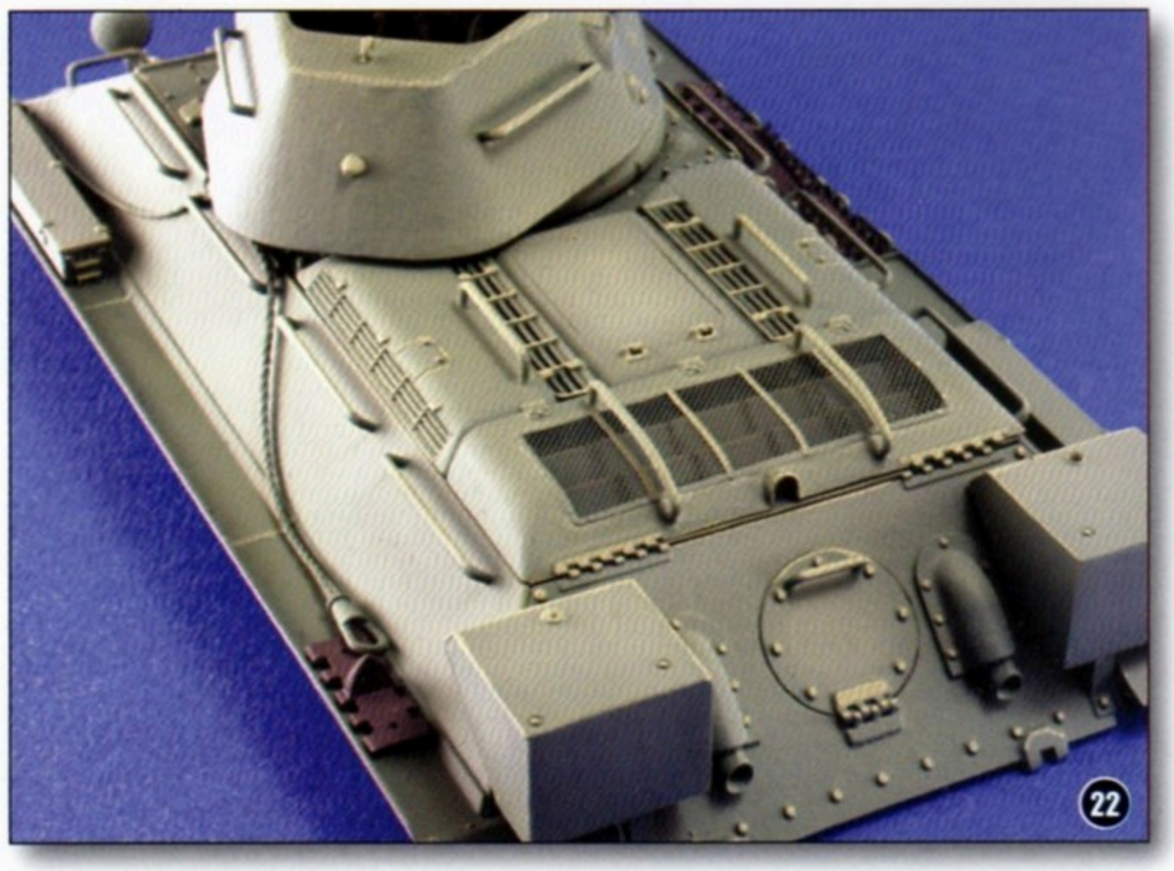
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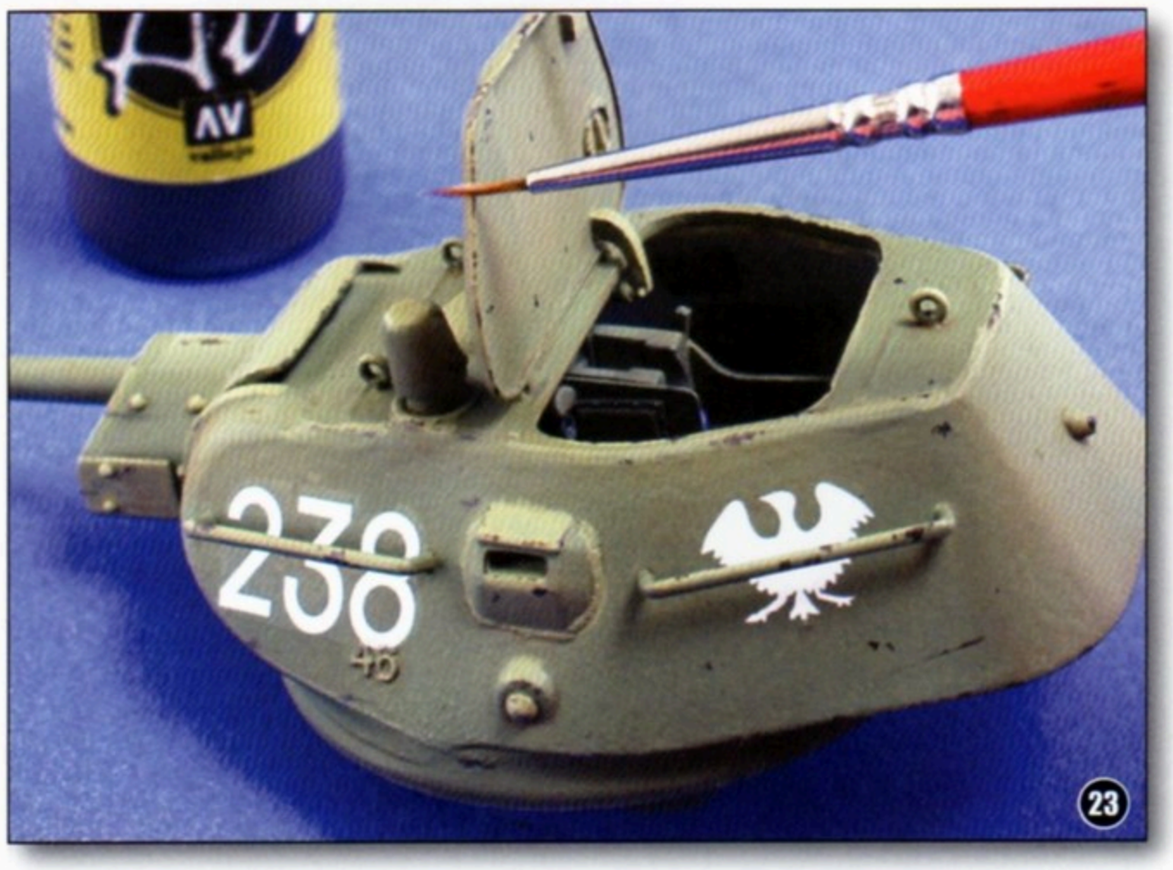
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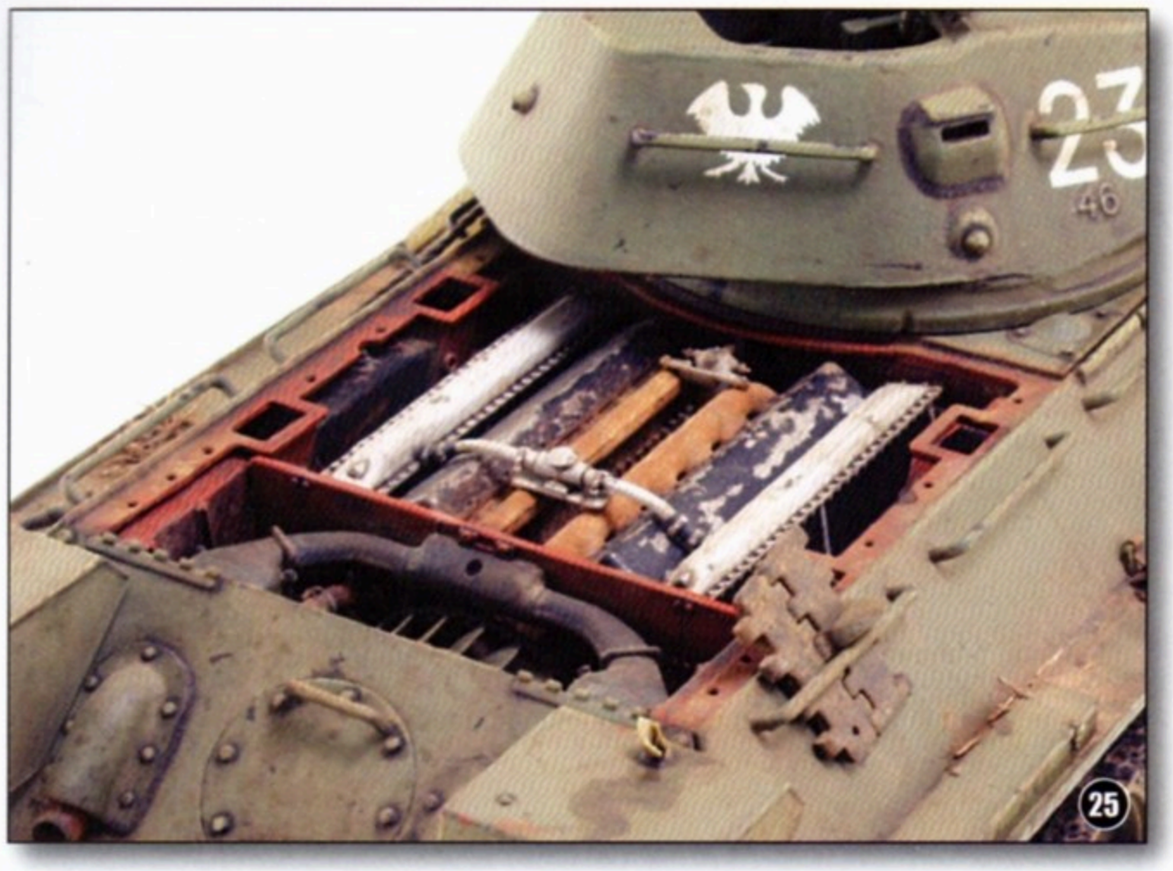
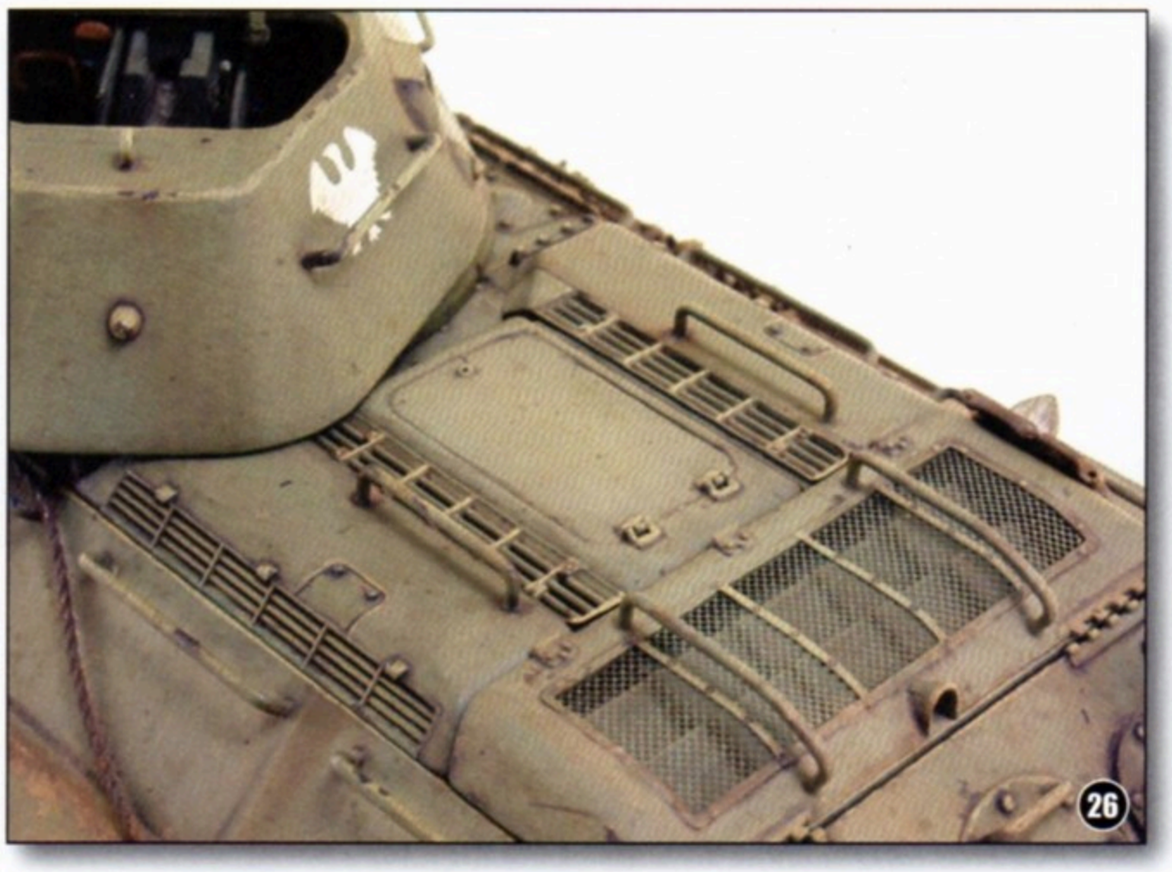
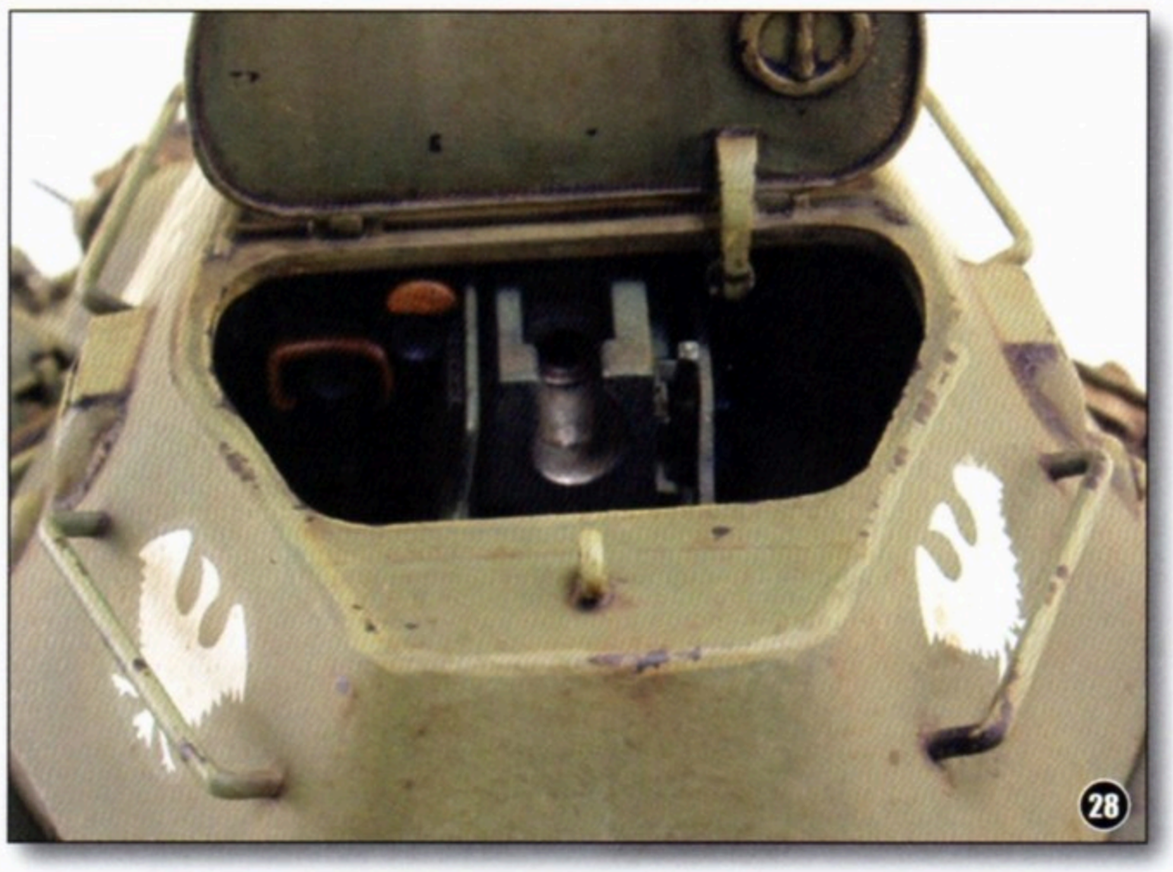
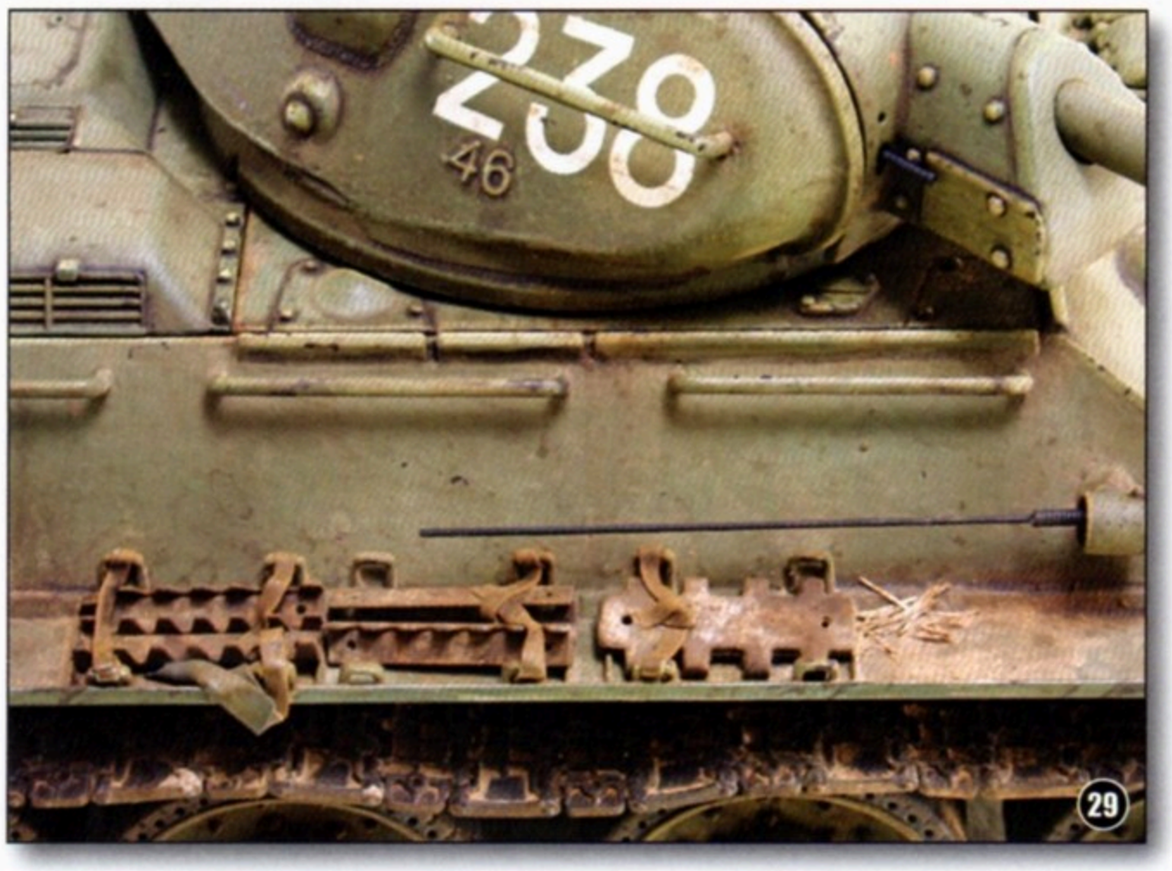
addition of cement causes this issue. A total of four tires crack in this manner.

Usually at this juncture of a build, I mate the hull halves and then add running gear. However, as I still have a few details to install in the interior, I instead move on to add the remaining details to the upper hull. I opt to keep the molded-on fenders, despite the detail being a bit on the soft side. I did choose to lose the front fenders, just because I could. Surface details, namely welds and the interlocking glacis plates, could have been more prominent on the hull. The array of six deflector strips protecting the turret ring appears to rise up from the hull, rather than look as though they were welded in place. The multiple welds running around the periphery of the bow ma-









***25**. I left the top portion of the rear deck detectable; so all my work on the engine is visible.* ***26**. AFV Club captures the look of the engine clamshell hatch quite well. But, due to a photo-etch malfunction, I install a screen and framework from a Voyager set.*

***27**. A German gas can adds a highlight to the side.* ***28**. Thanks to that extra large hatch, the completed 7.62cm gin is clearly seen.* ***29**, **30**. The results of applying thinned oils to the rear quarters of the AFV Club T-34 by flicking the paint from a brush.*

chine gun mount could also use some attention.

The huge driver's hatch was comprised of no less than 13 parts, including a pair of clear vision blocks (R-1). The hatch, which features distinctive Factory 112 hinge knuckles (rendered with great accuracy), goes together without issues. To my dismay, the manufacturer chooses to mold the large hatch actuator (parts C-42, 43) in the short-arm closed position.

The clear rear plate (F-4) boasts two wide hinges along its bottom edge, characteristic of Factory 112 vehicles. I add a slight torch-cut texture to the edges of this panel by gently scraping with the backside of a new No. 11 blade.

In order to showoff the engine compartment, the engine deck (C-22) is removable. Lateral vent covers (D-53, 54), hatch (C-4) and intake louvers (B-4) are glued on after the structural parts are textured with Mr. Surfacer 500. This entire assembly fits like a glove.

AFV Club captures the look of the large rear engine clamshell hatch (D-5) quite well. However, they drop the ball a bit when it comes to attaching the photo-etch screen (O). Four holes are found on the hatch, coinciding with tabs to be bent on the screen. In my estimation, there is no way to make this look

realistic. So, I fill the holes and install a screen and framework I robbed from a Voyager set.

Another unique feature of Factory 112 was the inclusion of handrails from stem-to-stern and a pair of large external fuel tanks. Whether it is to strap down gear, or as handholds for infantry, a total of 18 of these bars were added to T-34s. A bit clunky in appearance, AFV Club provides each and every one. The fuel cells, essentially just simple boxes, are added to the rear plate. A victim of some serious molding issues, the small toolbox (C-2) located on the right fender is beyond repair. So, I fashion a new one from styrene sheet and strip, then add the clasps and hinges I shave from the original part.

The tank is finished off with a brass wire antenna, a towrope, and just to add a splash of color, I attach a dark yellow jerry can. Spare track links and brass aftermarket ice cleats held down with epoxy putty straps are added to the fenders. I then glue the upper and lower hull halves together, but not without some adjustment being necessary.

AFV Club gives you four options for markings – three of which are for green-painted tanks, and the other a whitewashed scheme. I choose "White 238," a vehicle belonging to the Polish First Army, but whose unit is not identified on the sheet.

After the entire model is primed, I paint it Lifecolor UA002, FS34102 Green. Deciding to give this new-fangled color modulation thing a whirl, I then add a few drops of Lifecolor UA084, German Desert Yellow and both airbrush on highlights, as well as picked out specific details with a brush.

The kit decals are applied without any type of gloss undercoat. Using Mr. Hobby Mr. Mark Softer, the markings go on flawlessly. I don't know who this Mark Softer-guy is, but he makes some pretty good stuff.

Using a bucket of restraint, chipping is accomplished with Vallejo Model Color 71042, Camo Black-Brown and a fine-pointed brush. An overall wash of MIG Productions 502 Abteilung Wash Brown 080 follows.

The vinyl kit tracks appeared too flimsy for my liking, so they were replaced by a set of AFV Club 500mm Cast Tracks (35173). As easy to assemble as advertised, the individual links snap together smartly, and remain intact, for the most part, throughout the painting and weathering process. The tracks are painted Vallejo Panzer Aces 304, Track Primer, darkened with black overall, while the guide teeth are picked out with Chainmail. A full battery of washes and earth-toned pigments follows when the tracks are dry. The spare tracks, ice cleats and towrope are painted this same dark brown color.

The rest of my weathering process can best be described as "fluid." Pin and local washes using any number of artist's oils are applied, while at the same time pigments and pastels are added to both wet paint and dry surfaces of the model. I use almost everything at my disposal, in any fashion I deem necessary and at any given time. Keeping streaks to a minimum; I do add a few drips and stains here and there—most notably on the rear fuel tank where a crewman apparently lost the filler cap and the rag stuffed in its place has done a questionable job as a replacement.

Dust-colored pigments are applied heavier toward the lower extremes and rear of the vehicle, in some cases obliterating the overall green entirely.

To create a subtle variety of shades and thus make the monochromatic green a little less so, thinned oils are flicked from the end of a paintbrush onto the model. This random application of siennas, umbers, browns and ochres, of varying viscosities, create a multitude of hues that are extremely natural in appearance. Over the course of the weathering process, I often repeat this method a dozen times or more until I am satisfied with the results.

Wrapping up

For the most part, this has been a satisfying build. But remember, forewarned is forearmed. At every turn fit problems and other negatives haunt this kit. This is certainly not a "shake and bake" kit by any stretch of the imagination. However, given the scope of this model I would have to say AFV Club should be commended for taking on such an ambitious project. Once the issues are dealt with, a pleasing and fairly accurate rendition of the tank can be accomplished.

—Mike Kirchoff

MMiR RECCE

AFV Club T-34-76 Model 1942 Factory 112. Kit number 35S51. Kit graciously provided by the manufacturer.

AFV Club T-34 500mm cast Track Links. Kit number 35173. Kit graciously provided by the manufacturer.

LionMarc 1/35 scale DT Machine Gun Barrels. Kit number 10041. Kit graciously provided by the manufacturer.

References

T-34 Mythical Weapon. By Robert Michulec and Miroslaw Zientarzewski. Armagedon & Airconnection ISBN 0-9781091-0-4

War Pig.

The Tasca TG-2 1/72 AKUYAKU #1 is really an off the wall subject. The whole concept comes from the mind of Hayao Miyazaki, a famous Japanese manga artist. In his book, Hayao Miyazaki's Daydream Data Notes, Mr. Miyazaki has collected a variety of fantastical vehicles such as the Akuyaku.

The Akuyaku itself is a super-huge war machine driven by bipedal, grey-skinned pigs that are featured his manga stories.

The kit comes with a background pamphlet that is in Japanese. This makes total sense since this model was only intended for Tasca's home market. From the illustrations, I was able to draw the conclusion that the design was inspired by WWI British and WWII multi-turreted tanks of other nationalities such as the Russian T-35.

I first saw this model in a Japanese magazine a couple of years ago. The look of it really caught my attention, mainly due to the odd overall shape and the bristling armament. There's somewhat of a land battleship thing going on here. Later on I spotted the Akuyaku again on the Tasca website (www.tasca-modellismo.com). The kit had been discontinued for a while, but then it was re-released fairly recently with a full crew of 20 little pigs. Hooray!

I mentioned earlier that this was a Japan-only release. So, how did I get one? Why Hobbylink Japan, of course!

Most of the kit is molded in tan-orange plastic. Tamiya uses a color like this in their models, too. Personally, I prefer this color because it makes it easier to spot dropped parts on the carpet. There is a small sprue of clear parts, a couple of lengths of glueable vinyl for the tracks and some metal screws to set the idler wheels with.

Overall, this is a beautifully rendered model with a lot of great detail. The kickoff in the instructions is all about the tracks, which is the only part of the kit that gave me any real problems. Tasca provides you with a glueable vinyl band thingy that you add the shoes to one at a time. The shoes tend to come loose during handling and I reattach many of them during this project. This is actually no big deal. Just glue them back on. I also had the vinyl bands break. We'll talk a bit about this

Gettin' piggie with it. The Tasca 1/72nd scale fantasy tank.

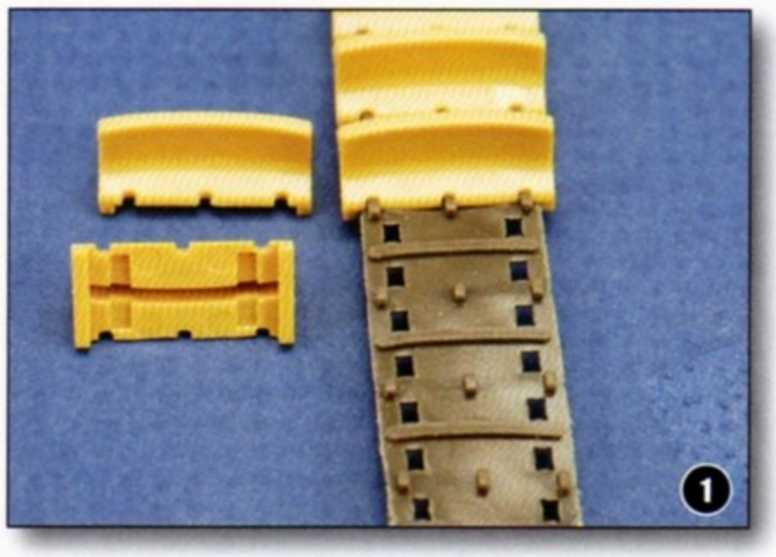
as I go through the rest of the assembly.

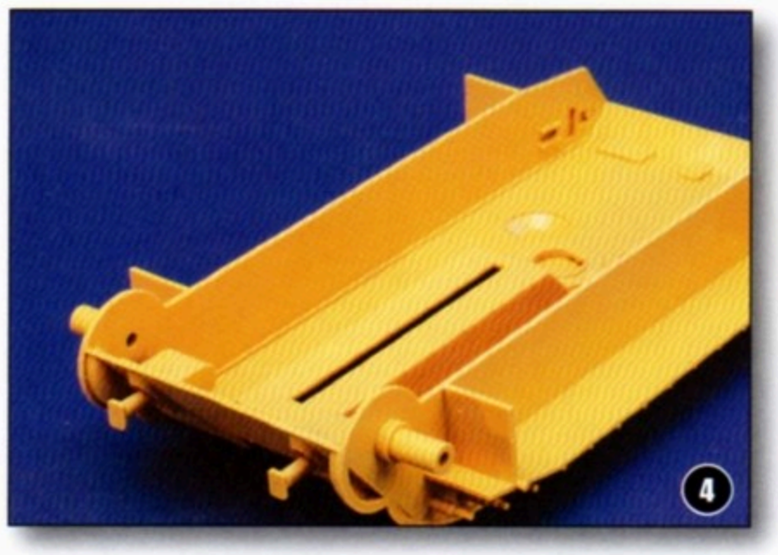
There are a ton of wheels for the suspension. Except for a bit of the front drive sprocket and rear idler, these all get hidden. There is a little mini suspension that mounts underneath the hull that looks just like the setup on a Renault R35. The track (F3) on this subassembly is too short and mine broke. The track is easy to fix though as it is made of glueable vinyl. I actually did not repair the band itself, rather I glue the visible part of the track to the bogie to hold the tension. When the entire subassembly is attached, it tucks up into the lower hull and hides the broken part of the track.

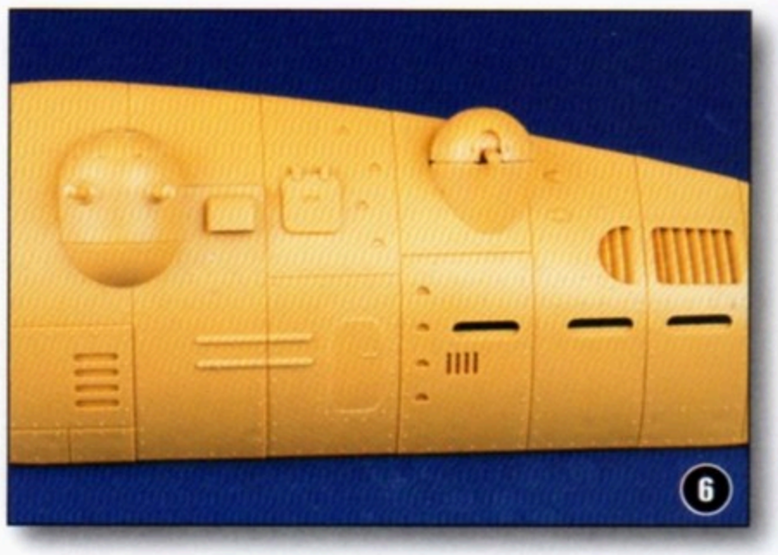
The lower hull is made up of a series of flat plates that fit together almost perfectly. The front bumper attachments are designed to have a little movement in them for some reason. The arms for the large rear idler are adjustable too. This feature comes into play later when you attach the tracks. There is an observation tower thingamajiggy that raises and lowers out of the rear hull and this comes next. It's made of multiple panels (C48-50) that require some filling. There is an option for a clear cupola ring here (G2), but I skip it. I leave the floor and the elevating shaft of this subassembly separate from the pod (parts C44-50) for painting. The clear porthole glazing parts are left off until after painting.

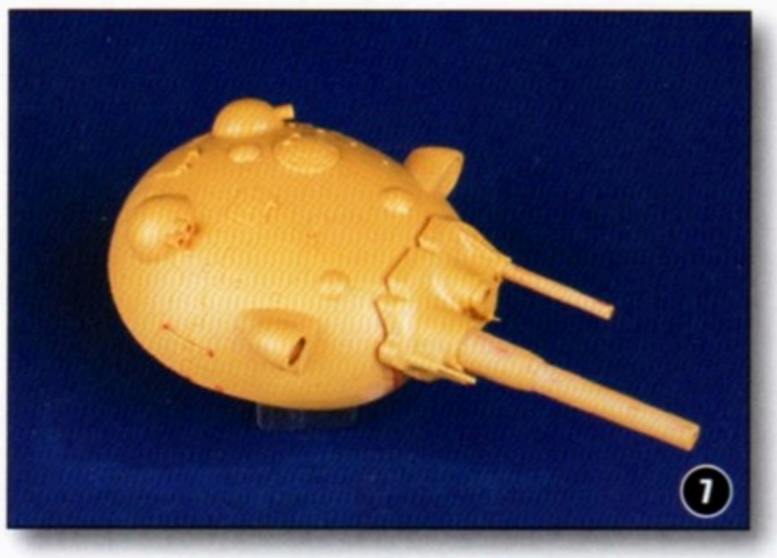
In the next three steps a bunch of detail parts and gun mounts are stuck to the upper hull. There are a lot of guns on this thing. The Maxim-type machine guns were a real hoot and they are all over the hull. My favorites are the two rear-facing turrets with three machine guns each. These turrets do take a little putty to hide the seam between the two halves though. Step 10 has you install the tracks but I decide to hold off until later as I painted my model in subassemblies. In step 11 more details and guns are added to the hull sides. There are lots of Maxims here too, three per side. This section of the model is an orgy of rivet detail. I left these subassemblies separate for painting.

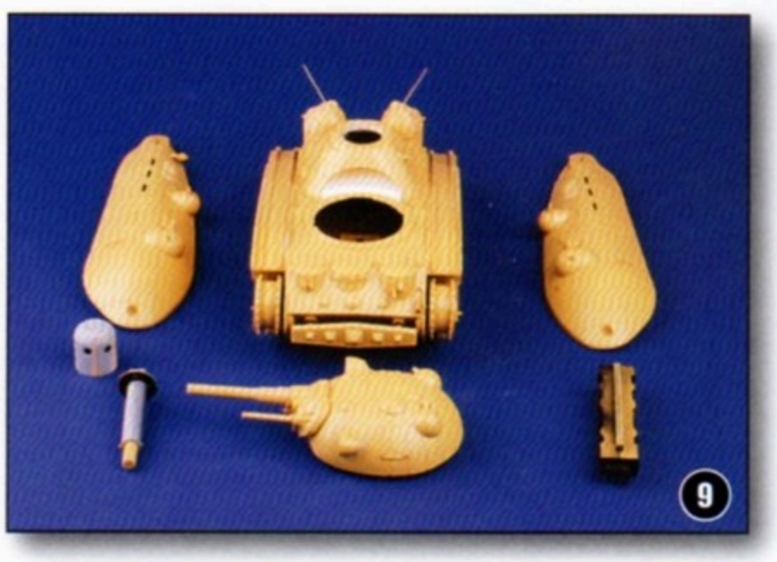
The turret is a fairly easy affair that has a lot of different details to stick on. The top and bottom halves take a little filler in the front below the mantlet. The mantlet has no less than five guns sticking out of it. The back of the turret gets two little double barreled sub-turrets that I think are sup-

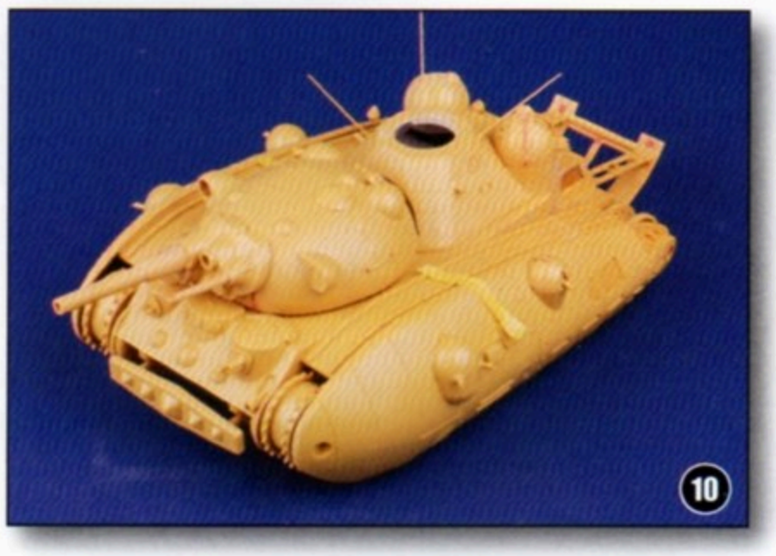












1. *The tracks are fabricated by cementing styrene track shoes to a vinyl band. The shoes tend to come loose during handling but they are easy to re-attach.* **2**. *Holy lotsa wheels! The hull sides hide the small road wheels after assembly. There are poly caps for the front drive sprockets and rear idlers.* **3**. *This little bogie mounts underneath the hull. The suspension detail is from a Renault R-35 light tank. The track is a bit short and broke later on but this was concealed when the bogie was installed.* **4**. *The flat panel lower hull goes together without a hitch. The protrusions are mounts for the bumper. For some reason, they move.* **5**. *A bunch of detail parts are added to the hull. I recommend leaving the antennae off until last as mine broke several times during the project.* **6**. *The hull sides have a lot of really cool rivet detail. You add some Maxim-type machine guns and doors here.* **7**. *The turret takes a little filler between the upper and lower halves. There are no less than five guns on the mantlet. I think the twin-barreled turrets on the turret rear are smoke dischargers or mortars.* **8**. *There is a lot of armament to attach to various parts of the vehicle. It's one of the things that make this kit so fun.* **9**. *The model was kept in subassemblies for painting.* **10**, **11**. *Here's a look at the mocked-up model without paint.* **12**, **13**. *The model was undercoated with a dark brown mix (Tamiya XF-2, Flat Black and XF64, Red Brown) before applying the sand color (XF55, Dark Tan, XF60, Desert Yellow and XF1, Flat White).* **14**, **15**. *The camouflage scheme was inspired by French tanks from the mid-1930's. The green areas were hand-painted with an outline of Vallejo 70894, Camo Olive Green and then filled in with the airbrush using Tamiya XF-58, Olive Green.*

posed to be smoke dischargers. There are two spotlight-lookin' things, one for each side of the turret. The left-hand light has a clear lens. To get away with painting this, I use white glue to put C20 and C24 together for painting and then crack it open to put the clear part in later. There is an option for a clear part (G4) for the commander's cupola, but I just went with the regular plastic one (C31).

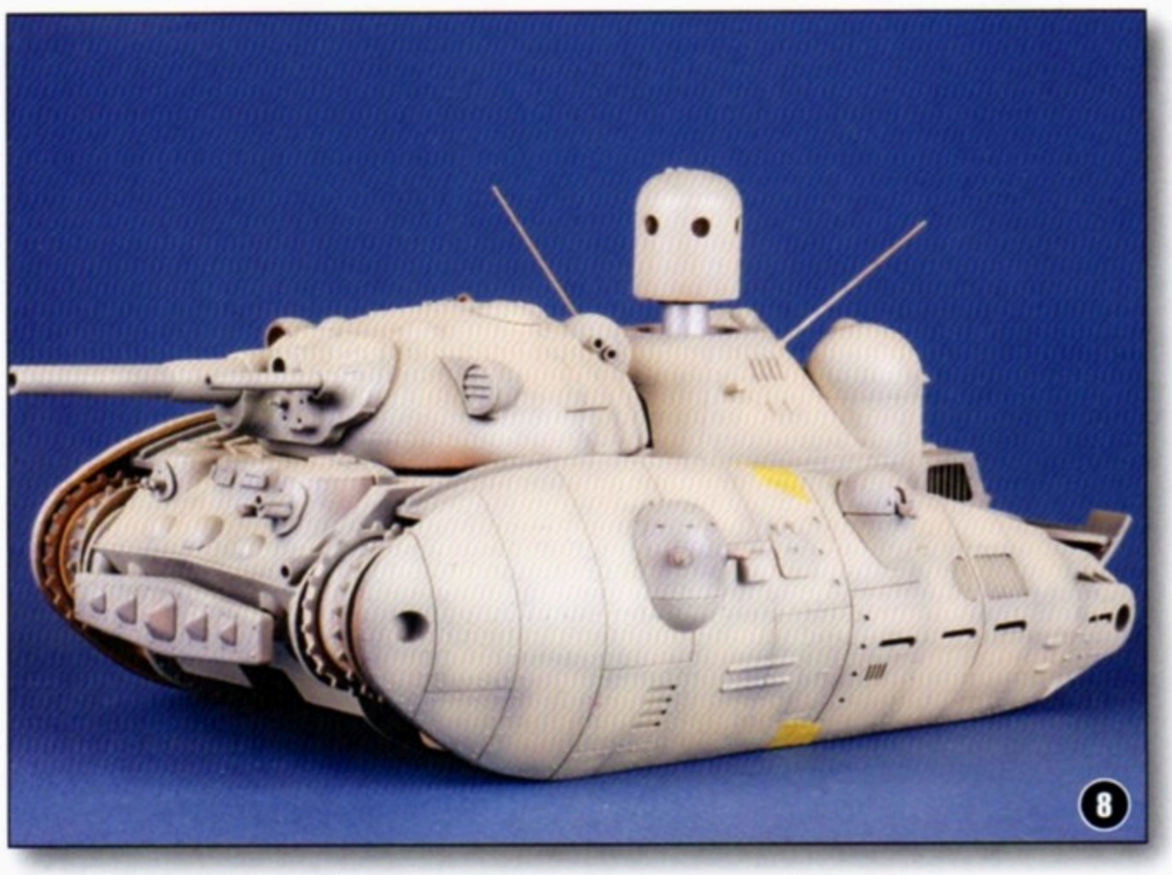
The last things I did before painting are attaching the front drive sprocket, rear idlers and antennae. I probably should have left off the antennae as these broke during painting. This left me with the following subassemblies for painting: the hull, turret, the hull side panels, two observation tower pieces and the tracks.

Paint your pig

This model went together so nicely that I ended up spending far more time painting than assembling. To keep things simple, it is possible to just follow the painting guide in the instructions that calls for a red-brown mottle over dark yellow.

That being said, this is a fictional subject. You can pretty much do what you want with it. I decided to do my own thing with the paint job. French tanks from the 1930's that had a hard edge sand and dark green theme going on inspired the paint scheme.

The basic paint scheme was done while the model was still in subassemblies. I did mock this up to make sure that the paint scheme colors were consistent. Tamiya acrylics were used throughout for the airbrush work. I start with a dark brown undercoat made from Tamiya XF-2, Flat Black and XF64, Red Brown. The tan base coat is made from a mixture of XF55, Dark Tan, XF60, Desert Yellow and XF1, Flat White. The green camouflage design is given a hand painted outline of Vallejo 70894 Camo Olive Green, then details are pre-shaded using an airbrush with XF2 Flat Black. Olive Green (XF-58) is used to fill in the camouflage areas. A post shade is added around the green areas using a very diluted dark brown. Tamiya AS-12, Bare Metal Silver is used for the observation pod shaft. Everything is then given a coat of Future floor polish to protect it.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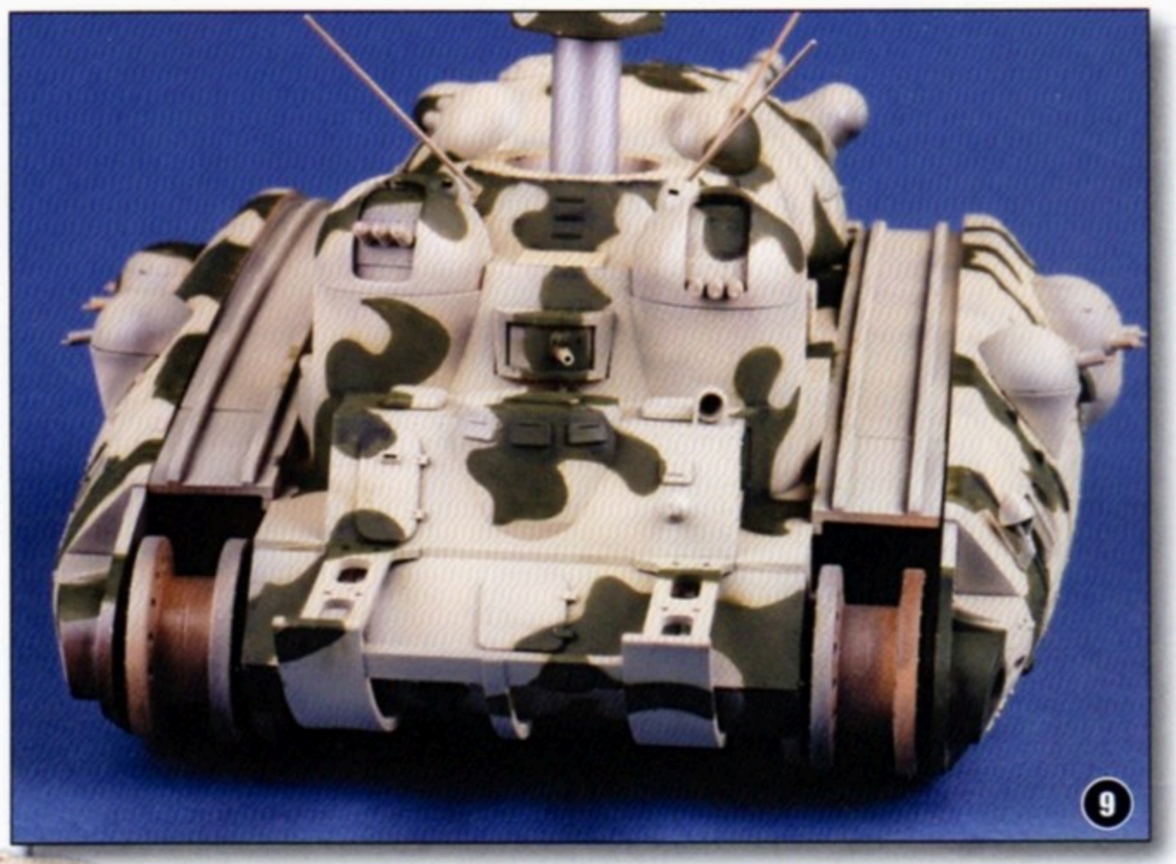
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Once the basic colors are applied, I finished putting the whole thing together. I run into a little trouble putting the tracks on. One of the vinyl bands tears while I am doing the final adjustment on the rear idler. I use the provided screws to set the track tension. After calming down, this turns out to be no big deal. After removing the styrene track shoes around the break, I am able to re-bond the track by super gluing it together in two small spots and then re-welding the vinyl pieces with a liberal amount of Tamiya Super Thin cement. The repair turns out to be very strong and the re-attached track shoes hide the scar on the vinyl band.

Attachment of the hull sides takes some care. There are two good mounting points for the lower part, but it is important to make sure the upper part attaches evenly to the upper track skids. The attachment of the turret and observation pod goes off without a hitch.

With everything together, I complete the last stage of painting and weathering. Detail parts are mostly hand painted. The vision ports are all painted with Winsor & Newton French Ultramarine. The smaller gun barrels are given a coat of Vallejo 70995 German Grey followed by metallic highlights using Prismacolor Metallic Silver pencil. The large red and white number decals come from Dragon's Battle of the Bulge King Tiger.

Paint chips and wear effects are done with Vallejo paints. The light green chips are a mix of 70894 Camo Olive Green and 70989 Sky Grey. The light tan chips are a combo of 70837 Pale Sand and 70951 White. The dark brown chips are 822 SS Camouflage Black Brown.

Oil paints are used for the wash and streaking effects. From Winsor & Newton I use Yellow Ochre, Burnt Umber and Raw Umber. From Lukas I use Beige. The model is also drybrushed using Naples Yellow before spraying the whole thing with Vallejo 70159, Matt Varnish.

The tracks are originally sprayed a very dark grey mix of XF2, Flat Black and XF65, German Grey. I use AK Interactive's new Engines and Metal Weathering (AK-087) set to weather them. AK-083, Track Wash is applied first. This is a rather thick dark red-brown mixture that is used straight out of the bottle. Next I dust on AK-083, Track Rust Pigment very liberally. The metallic highlights are added using AK-086, Dark Steel Pigment. I set the colors in place by airbrushing Turpenoid on the tracks. The end result is very pleasing.

A final layer of filth is added using Mig Pigments: P028 Europe Dust, P033 Dark Mud and P039 Industrial City Dirt.

The herd

The thing that really grabbed me about this model is that it comes with a full crew. There are twenty crew figures provided. All are one-piece styrene castings. You get the commander, the cook, the butler, the mascot, two mechanics and fourteen crewmembers. The molding is soft and this makes precision painting a little difficult. I deviate from the painting guide when it comes to painting my lineup of teeny swine.

The directions call for the flesh parts to be painted grey (like in the original illustrations), but I go with Vallejo flesh. The clothing on the cook, mechanics and butler are painted according to the instructions. For the rest of the crew, I use a blue-gray mix made from Tamiya colors. To keep things simple, my porcine pack got a wash and a light drybrush to bring out the details.

Final thoughts

This is a wonderful model. I love the whimsical theme. Tasca has done a great job engineering this kit. A kid could put it together in a few evenings at the kitchen table. Since it's a fictional subject, there is plenty of license when it comes to paint and finish. It's perfect for anyone looking for a fun subject without using your calipers.

—Jeff Kleinhenz

MMiR RECCE

Tasca 1/72 Bad Guy (Akuyaku 1 Go) All Crew Set (w/20 Pig Crew Figures). Kit number TG-2. Suggested Retail 4,000 Yen (around $50.00 US). Kit graciously provided by Hobbylink Japan (www.hlj.com)

AK Interactive Engines and Metal Weathering Set. No. AK-087. Suggested Retail $27.95. Graciously provided by AK Interactive USA (www.ak-interactive-usa.com)

2012: a Dump Truck Odyssey

Two Spanish modelers create a masterpiece in styrene and resin.

GMC and Chevrolet officially began the production of "COE" trucks (cab over engine) in 1939. Although they did not have front wheel drive, during WWII they were modified for military use. The initial model ACKWX was based on a civilian GMC of the prewar period. The respective suffixes 353 and 352 were assigned based on the length of the chassis; long (13.5 feet) and short (12 feet).

The code for the designation of the truck model is as follows: A: year model (1939); F: cab over engine (COE); K: optional front wheel drive; W: dual rear axles and X: special chassis.

A large number of models were constructed on the initial base of the CCKW. They enjoyed a great reputation as much as during the war as after. They were not only used in the armies of other countries, but also by construction companies, transports, fire fighting, etc. until retired sometimes after as long as 70 years!

The scale model

The idea to construct this model arose after I obtained a Wespe Model railway AFKWX. Following my custom to seek out non-commercialized, rare models, I decided to build and covert it to the dump version. So I put hands to the work on a model that can best be described as torture. I say this because the Wespe kit is crudely molded and considerably out of scale. So much so, that I could not use it.

A single photo that I discovered in the French book, "The GMC 6X6 and DUKW, a Universal Truck" further inspired me. This shows a COE dump with larger tires and single rear wheels—in fact the same tires and rims as those used on the amphibious DUKW. The text briefly states that these conversions were made and issued to engineering units. I have searched unsuccessfully for more information about their use, but since the basic facts are all in place, I feel it is OK to proceed.

I knew at that point that the model must be scratchbuilt, although it is really a combination of different commercial pieces and others of my own construction.

The chassis

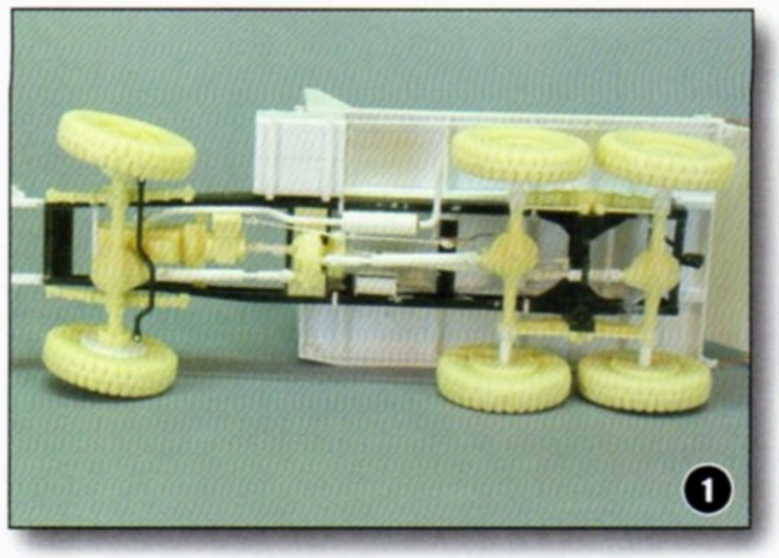
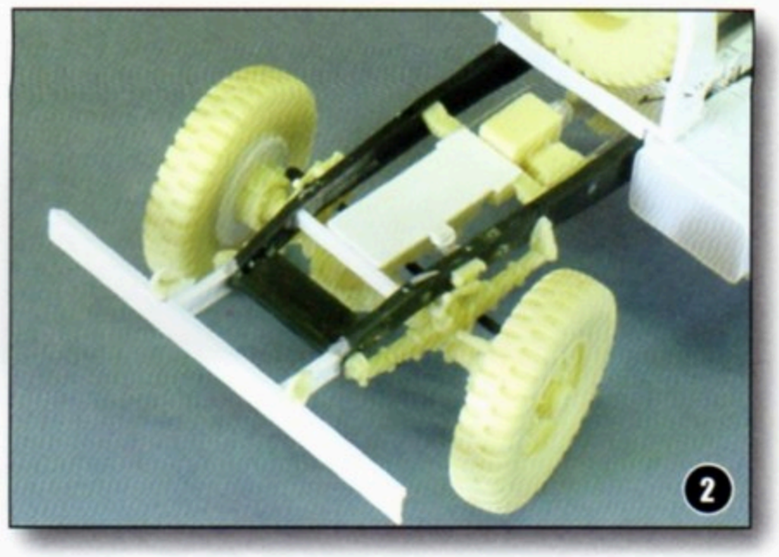
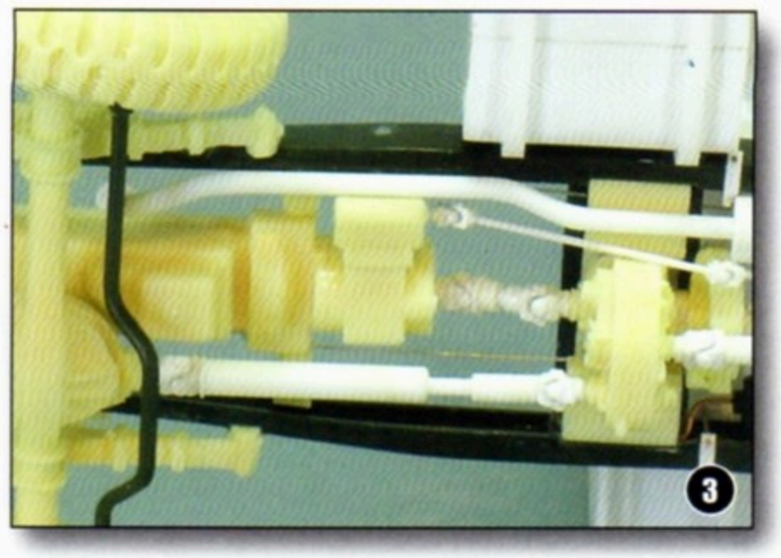
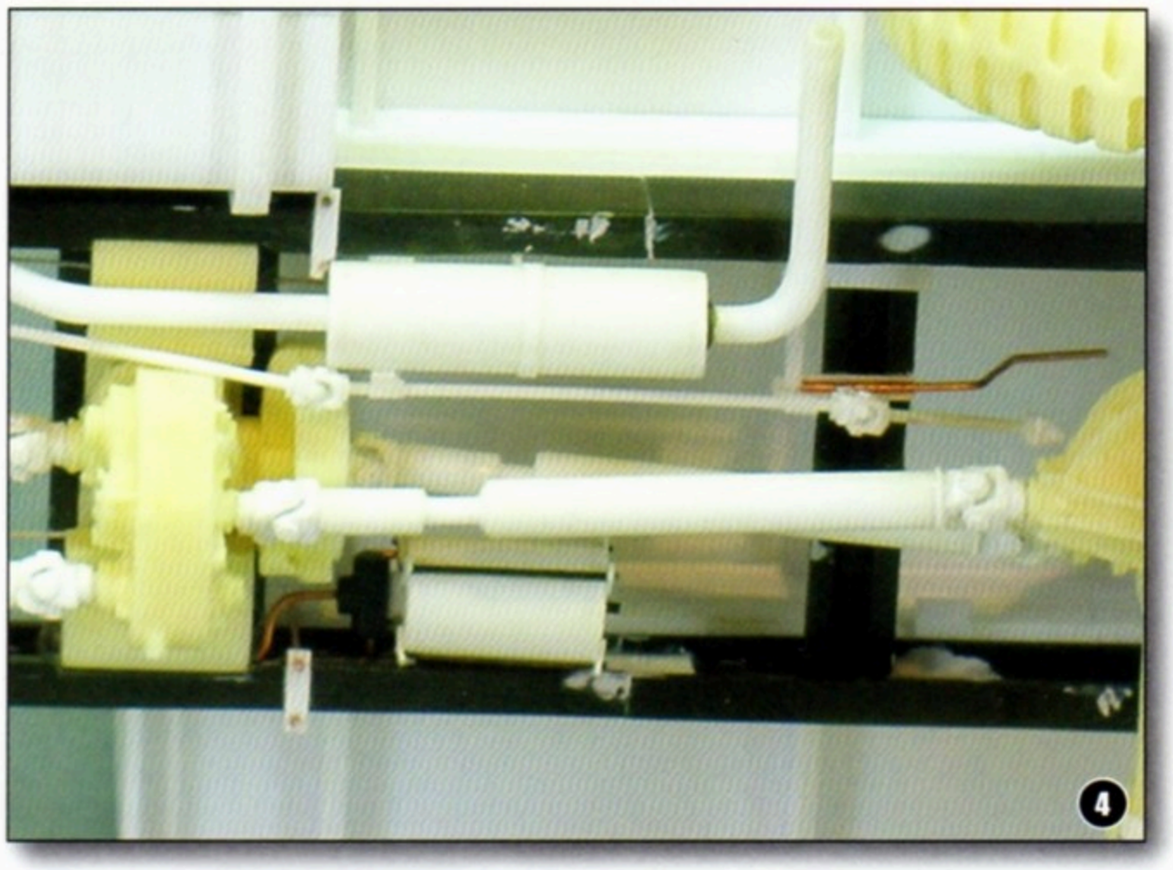
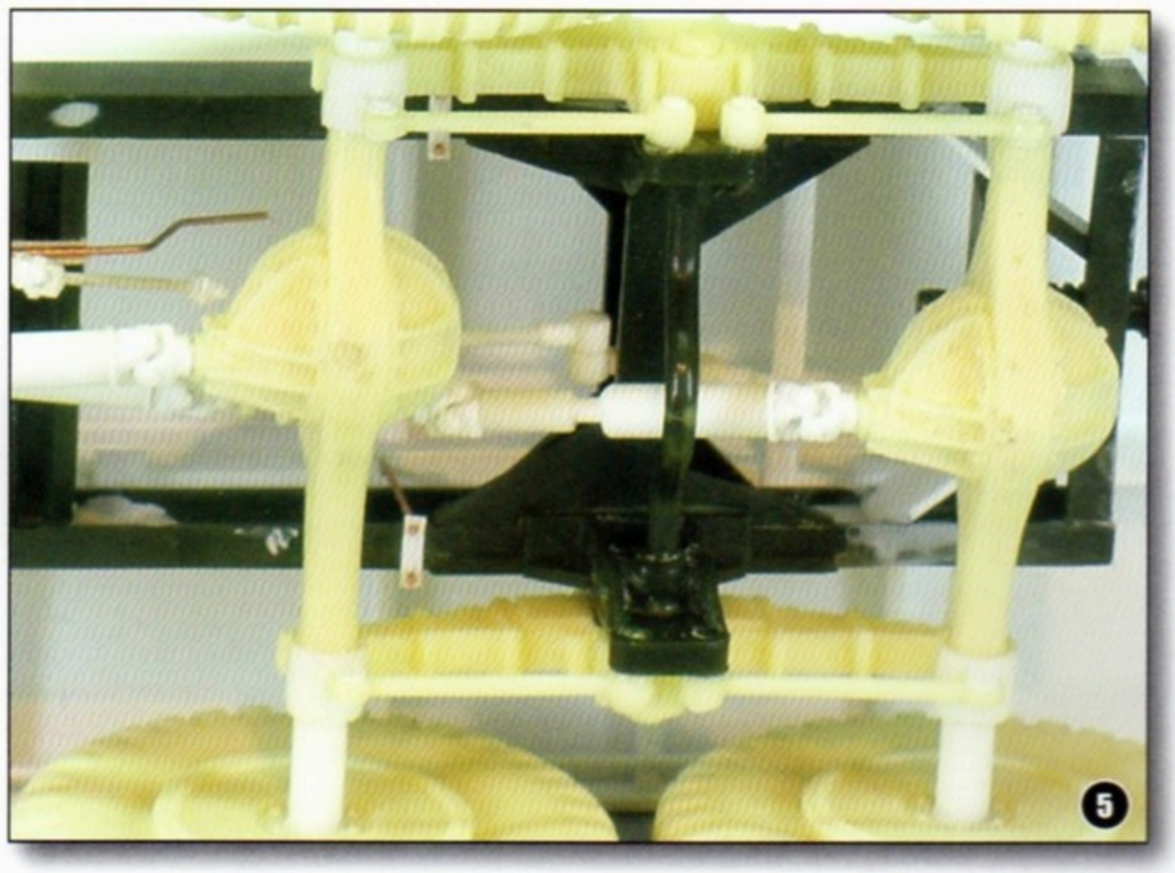
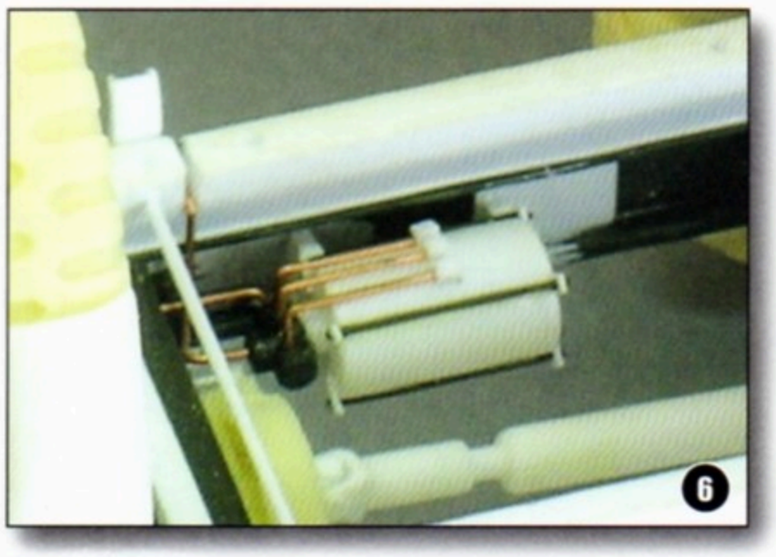
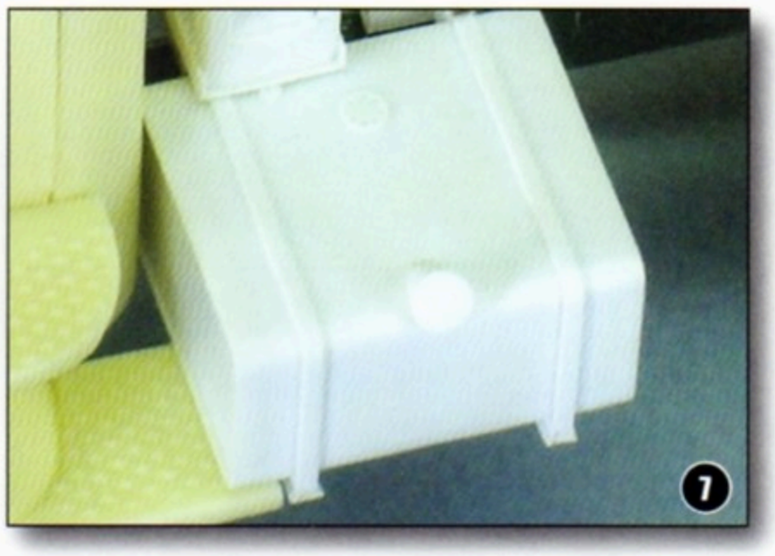
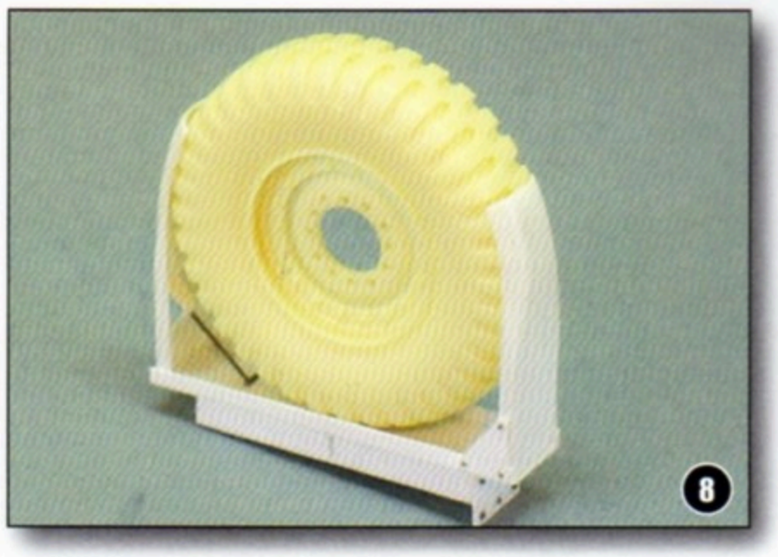
For the basic chassis, I use a leftover 353 part from the older Italeri kit and shorten it to the proper length of the 352. Photos indicate that these trucks use the Banjo style axles (as opposed to Timken, the other type used). Fortunately for me, these axles and virtually the entire transmission system are available from Masters Productions. This is item number 35028.

It is necessary to modify the transmission drive shafts in order to accommodate the shorter wheelbase of the truck. I add all new shafts and links, as well as several other suspension components.

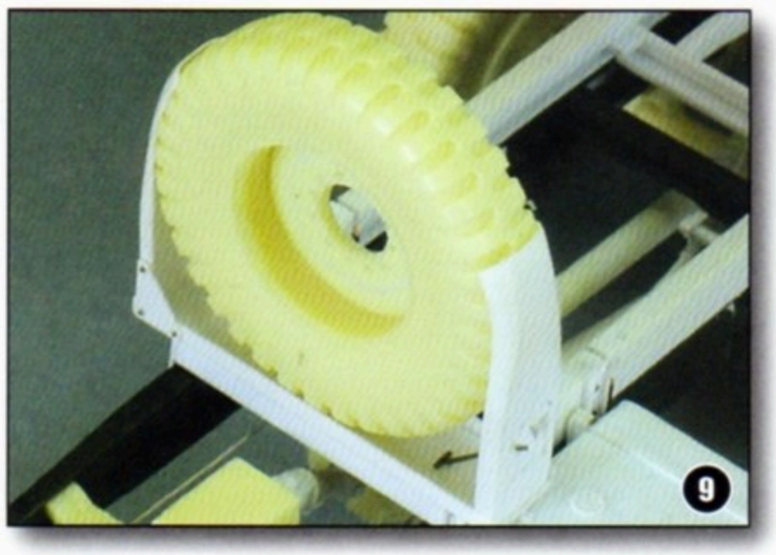
Continuing, I reconstruct the brake pump, the fuel tank, exhaust system, front bumper and extension, as well as the base of the engine. The Masters set includes a half engine to represent what is visible from beneath the vehicle. I add a base to allow the resin parts to be installed onto the Italeri chassis.

The support stringers on top of the chassis are made from styrene strip. These are actually large wooden beams. To achieve the wood grain texture, I use corse grain sandpaper. The stringers are attached to the chassis with heavy gauge rod, which I represent with copper wire.

Another fortunate occurrence is the availability

***1.** For the basic chassis, I use a leftover 353 part from the older Italeri kit and shorten it to the proper length of the 352.* ***2.** The Masters set includes a half engine to represent what is visible from beneath the vehicle. I add a base to allow the resin parts to be installed onto the Italeri chassis.* ***3.** The axles and virtually the entire transmission system are available from Masters Productions.* ***4.** I add all new shafts and links, as well as several other suspension components.* ***5.** The Mig Productions DUKW wheel set also provides the rear springs. Since the rear axles are designed for dual wheels on all stations, it is necessary to lengthen them.* ***6.** The support stringers on top of the chassis are actually heavy wooden beams. To achieve the wood grain texture, I use heavy grain sandpaper. Also I reconstruct the brake pump and its lines.* ***7.** My scratchbuilt fuel tank.* ***8.** These vehicles have a spare wheel mounted behind the cabin. The supports for are made using the vacu-form technique.* ***9.** The remainder of the spare wheel holder is made from thin styrene sheet.*



of aftermarket DUKW wheels. Available from Mig Productions, they are item number MP 35-016. This set also provides the rear springs and a few other useful parts. Since the rear axles are designed for dual wheels on all stations, it is necessary to lengthen them. This is accomplished with styrene rod.

These vehicles usually have a spare wheel mounted behind the cabin. The supports for are made using the vacu-form technique. The remainder is made from thin styrene sheet.

The cab

Since the cabin of the Wespe kit is unusable due to its excessive size, my only choice was to obtain one of the excellent assemblies from Masters Productions. Although there is no doubt the quality of the parts, I consider the price of €58.00 too high. Of course, a complete model cost can cost well over twice that. Such is the choice of the scratch builder!

In addition to the cab, also included in the purchase are the headlights, the steps, interior seats, dashboard, steering wheel and front grille.

The dump box and elevation system

American dump vehicles use one of two types of elevation systems for the box, Gar Wood or Heil. After carefully observing photos of other GMCs, I decided on the second system, even though is was more complex. It is constructed using different plastic stock from Evergreen. For the piston rod, real metal rod from Mini Mecca is used.

I must admit that I build both systems and the photos of the Gar Wood type can serve as an illustration of the other type.

This will be the part of the project that imparts most of the life into the model, especially after the painting process. It will be important to get all the vital details correct, and to show off the details of the elevation system, I plan from the beginning to show the box elevated.

The entire structure is created from styrene sheet and strip. The technical manual is my primary reference. Construction does not present too many challenges. The most important aspect of building a structure such as this is to keep the various elements square and straight. A mistake in this area would

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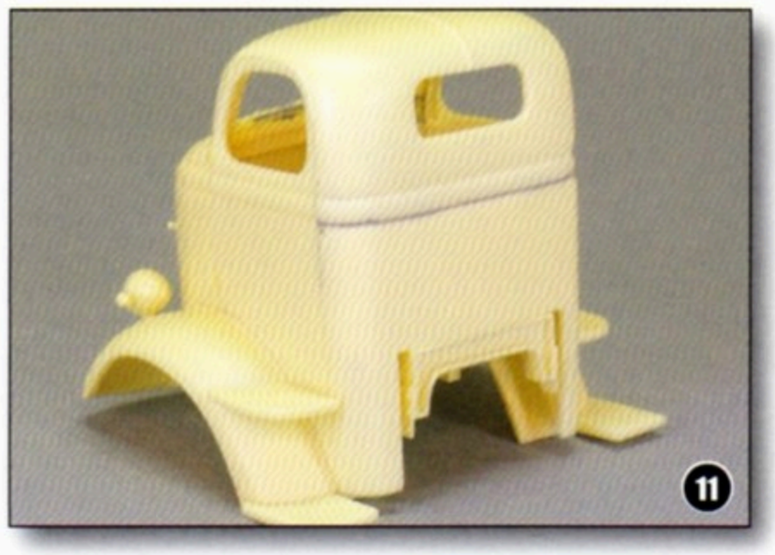
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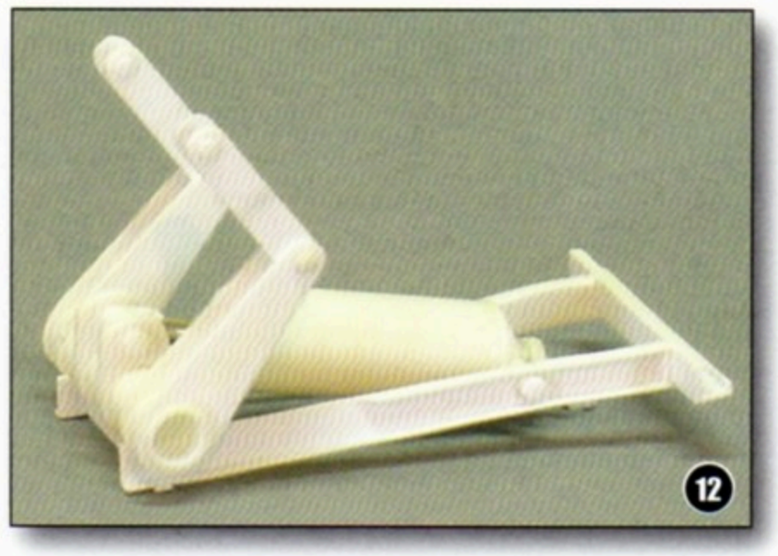
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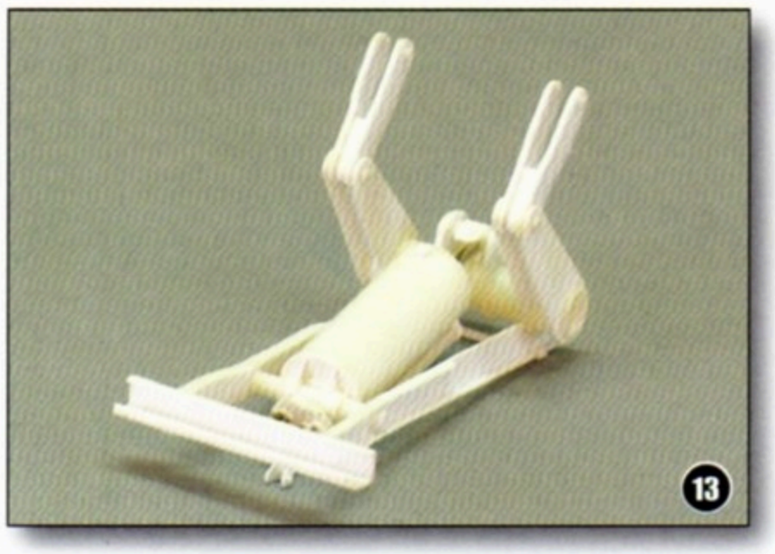
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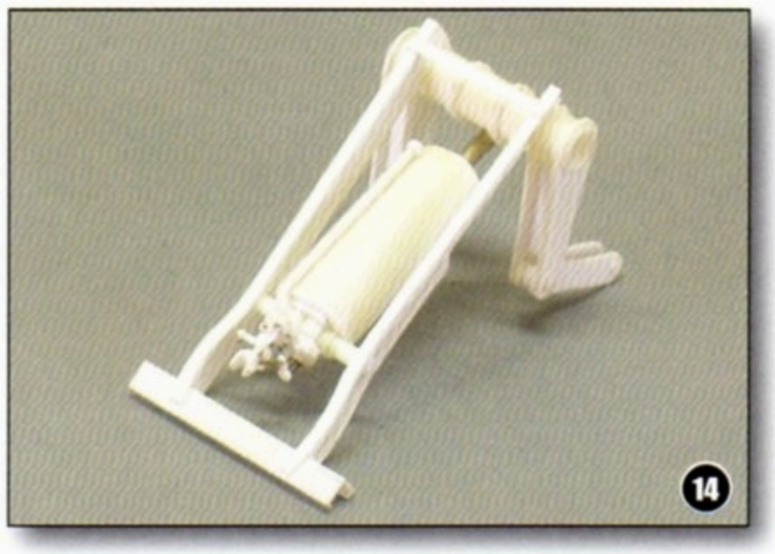
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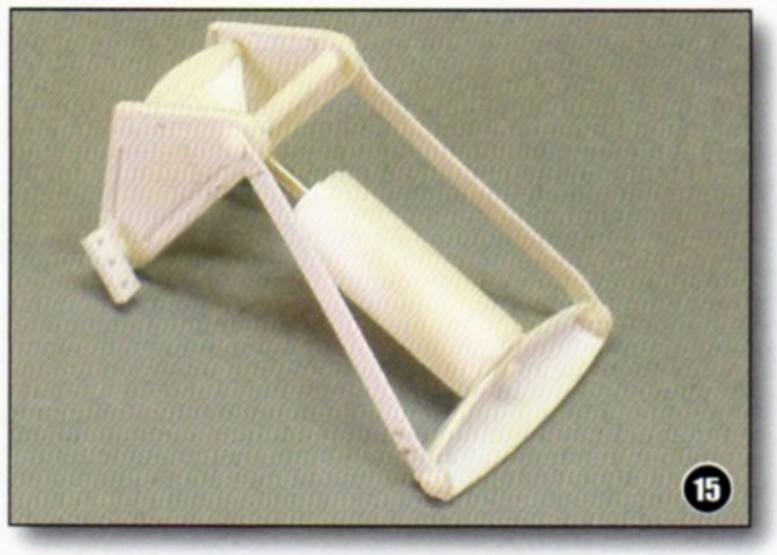
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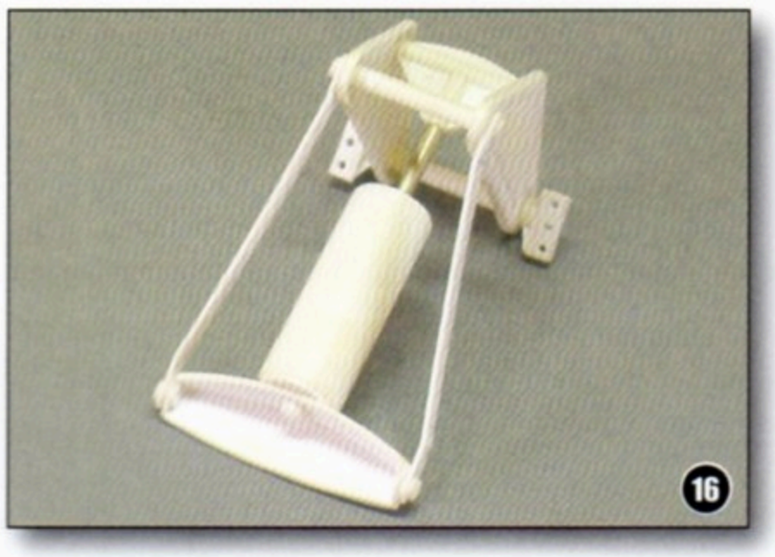
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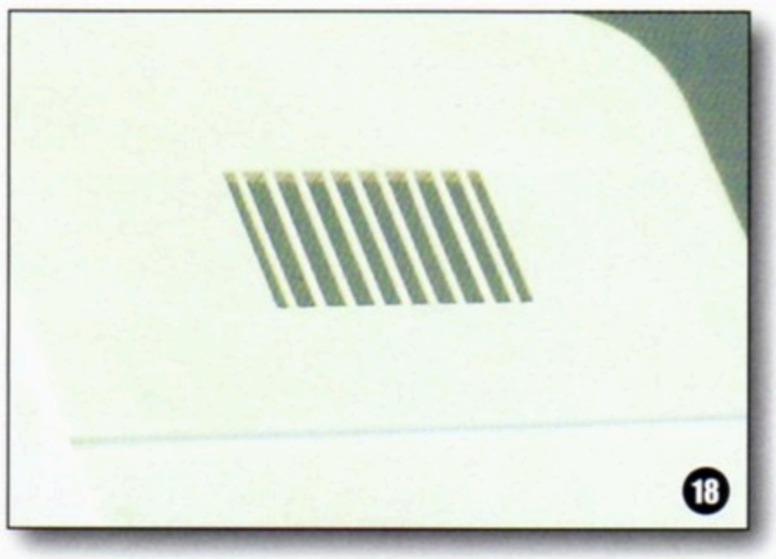
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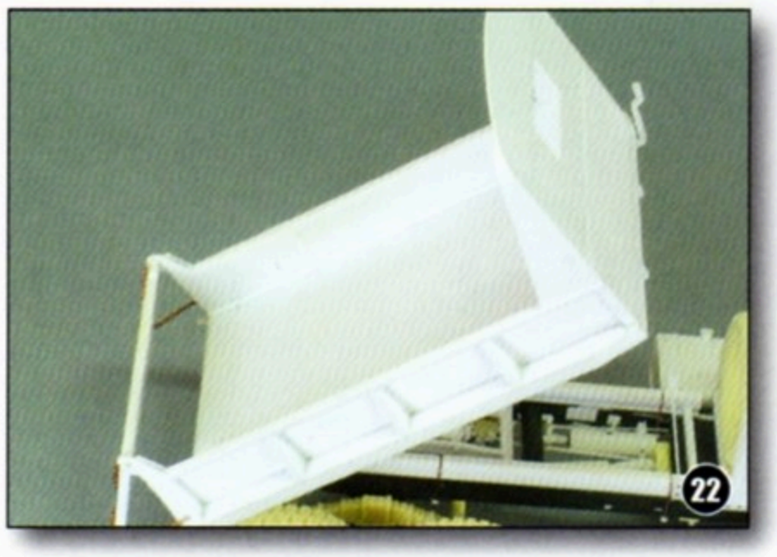
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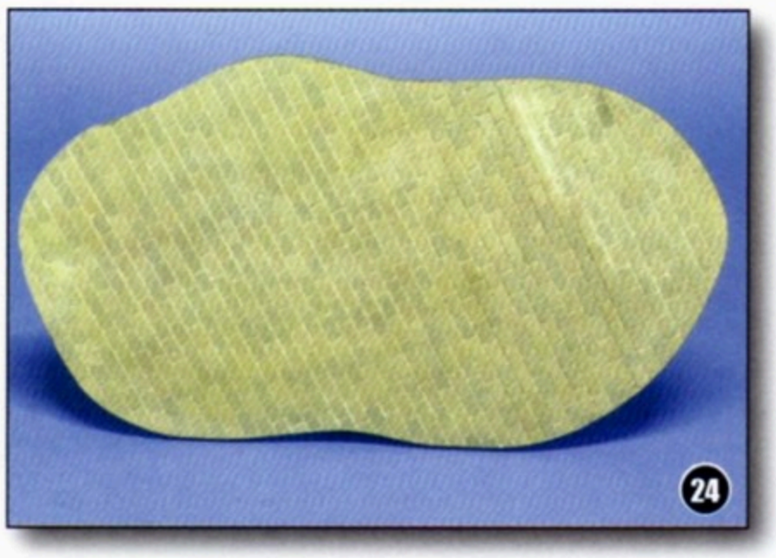
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greatly affect the appearance of the finished model.

There are some fine aspects to the box, such as the grated opening in the box face and the linkage for actuating the rear door. I create a working rear door so that it will remain at a constant angle in relation to the box.

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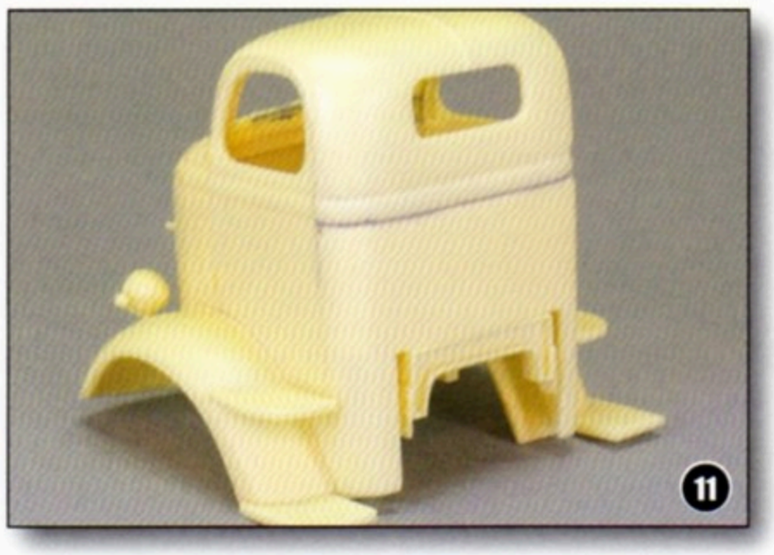
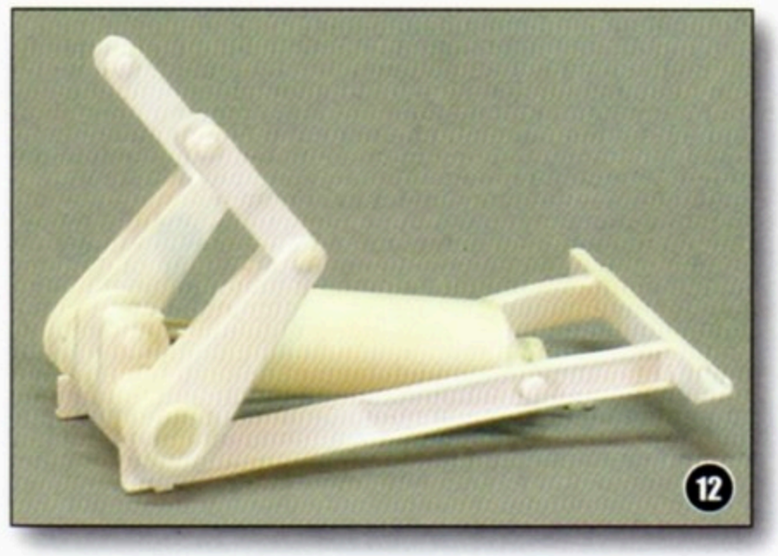
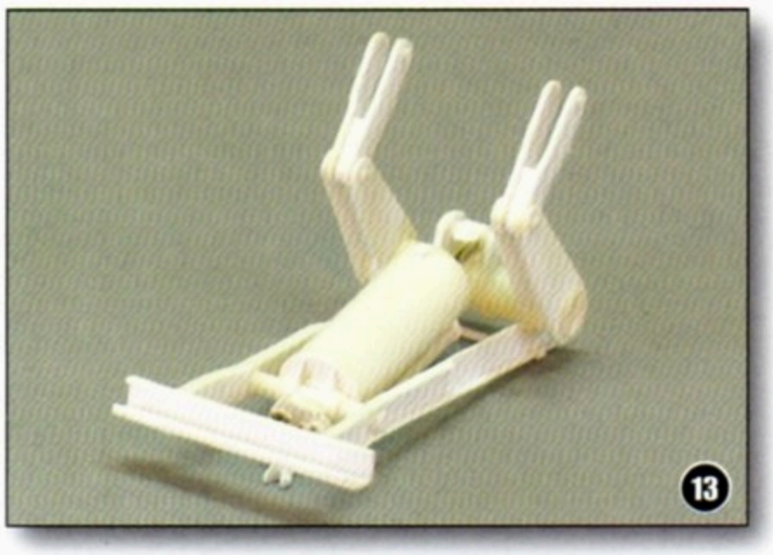
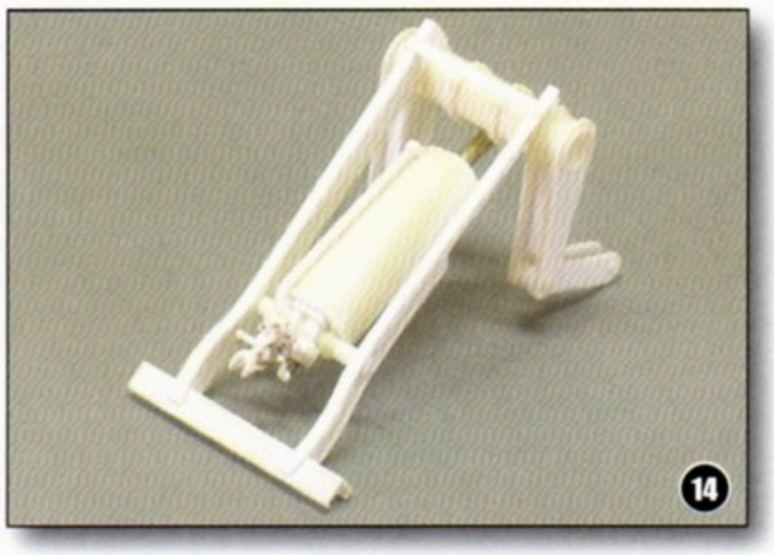
Painting

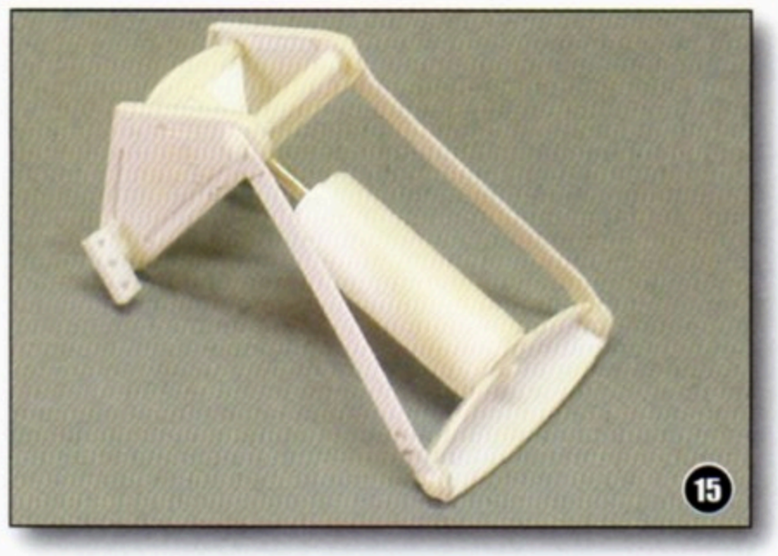
Imagine that you are a great fan of basketball. Then suddenly, Michael Jordan shows up and invites to you to play "21" with him. I hope I do not exaggerate too much when I state that this is how I felt when Pedro proposed to me that I paint his truck. When I first began building scale models, he was already one of the best ones around. So in one blow, I go from admirer to collaborator.

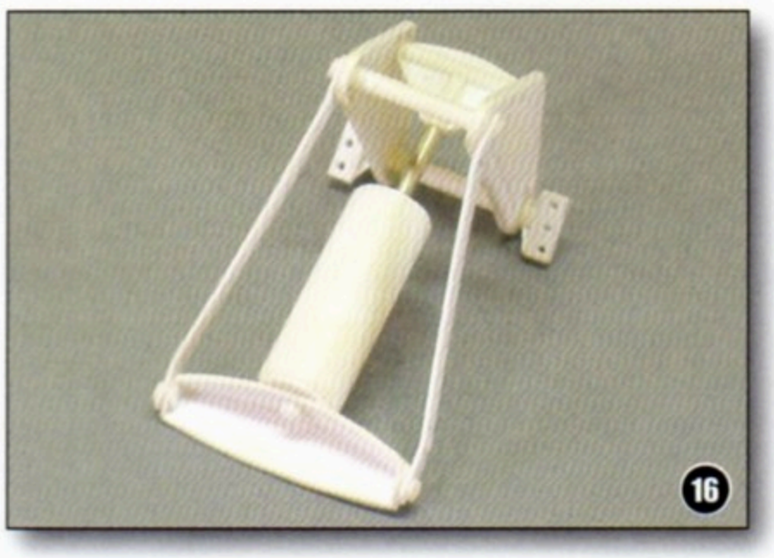


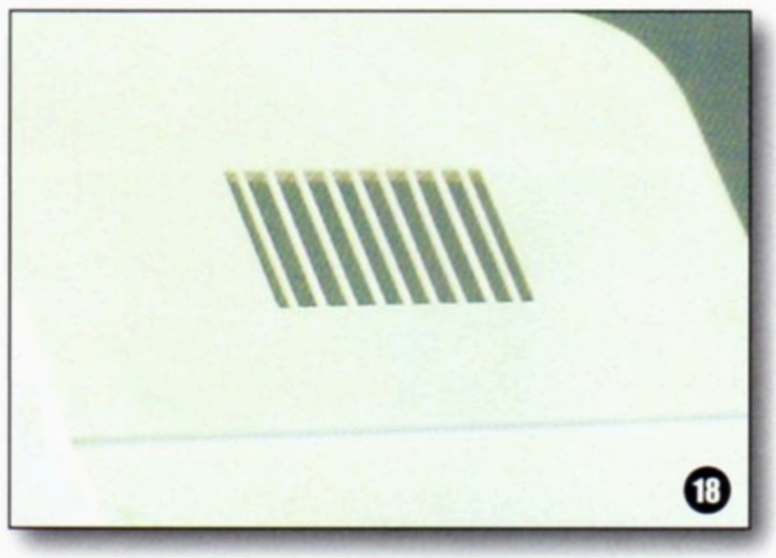


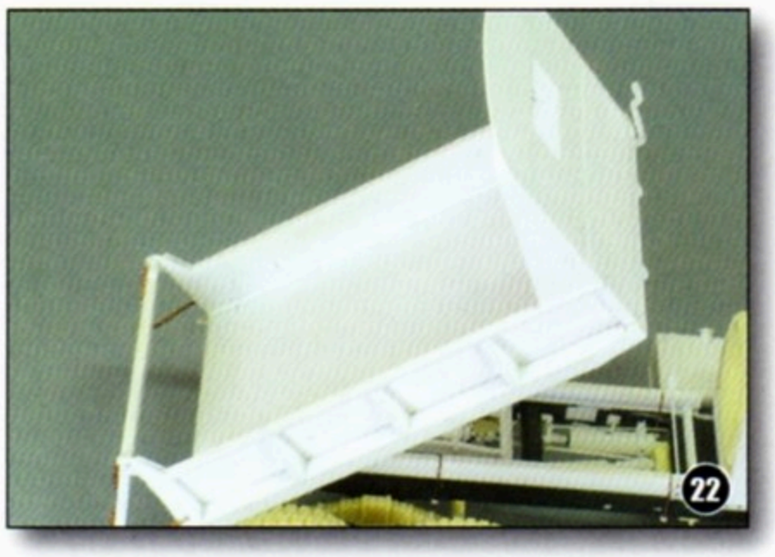


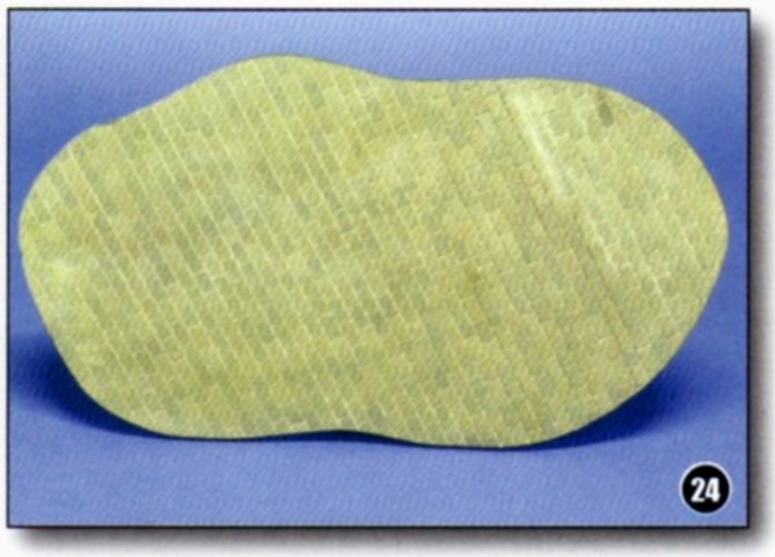












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10, **11**. *The hard cab is one of the excellent assemblies from Masters Productions.* **12-14**. *American dump vehicles use one of two types of elevation systems for the box, Gar Wood or Heil. I decide on the second system, even though it is more complex. It is constructed using different plastic stock from Evergreen.* **15**, **16**. *I build both systems and these photos of the Gar Wood type can serve as an illustration of the other type.* **17**. *The entire structure of the load box is created from styrene sheet and strip. The technical manual is my primary reference.* **18**, **19**. *There are some fine aspects to the box, such as the grated opening in the box face and the linkage for actuating the rear door.* **20**, **21**. *The Heil mechanism in place. I always intended for the load box to be raised so that this area can be clearly seen.* **22**. *I create a working rear door so that it will remain at a constant angle in relation to the box.* **23**. *The completed model ready for Michel!* **24**. *A simple base was made from a resin section of cobblestones.* **25**. *The white stars are made with sticky paper transparency stencil. However, the numerals are dry transfers.* **26**. *The spilled fuel effects are created using a Titan oil color called "Betume."* **27**. *The wheels take many washes with oils and acrylics, adjustments being made with pigments and then dry brushing with black and grays.* **28**. *I create fine lateral scratches on the roof and the doors because of the rough environments the truck would work in.*

As one can see from the attached photos, this is a very special work. I always attempt to do my best on each model that I work on, but this time there is much more reason to do so!

Also, as it happens, in my profession I have seen many such trucks close up in their daily work. The pressure is on and I cannot fail!

Mapping out a strategy for the finish, I feel the overall objective is to represent an operational vehicle that features the wear logical to its use clearing tons and tons of rubbish in the restoration of a battered Europe. I do not want to go as far as showing severe damage to the cabin or chassis, but I do want to accentuate the wear and tear of the load box.

On the other hand, this truck is a true blank canvas with an infinite amount of opportunities to represent various weathering effects. In particular, it presents challenges such as the worn away steel of the load box, the multiple lateral scrapes and punctures that take place when loading stones and rubble, the dirt compressed in the roof of the cabin, the mud inlaid in the rims of the wheels, the oxidation in the bottom of the doors, spilled fuel and the mud splashes at the bottom of the chassis. With these ideas in mind, I put hands to work.

I begin with a base coat of Tamiya XF-65, Field Grey. This is a little different from what most modelers use for U.S. olive drab. However, I feel that this color provides greater opportunities for fading and weathering. The color can drift to the grey tone, but to keep it within the brown range, I mix it with Tamiya XF-64, Red Brown. The final result is a close match to the famous "American green."

To accentuate the rounded top of the cab and represent additional fading, I lighten this higher area slightly. Conversely, I darken some areas, mainly around the strengthening ribs of the load box.

The white stars are made with sticky paper transparency stencil. However, the numerals are dry transfers.

The interior of the load box is first painted with a gloss black base on top of which I apply Alclad Duralumin. Later, a treatment is applied with pigments mixed with water. Once dry, I used a clean, dry hard bristle brush to create lateral lines and scratches in the bottom of the box. I also use the dry brush technique to represent the loss of paint by friction and later oxidation.

The next step is the placement of chips. It is very important to study where to place them, their shape and size, and how they would have occurred.

All the chips are painted one by one with Vallejo Panzer Aces acrylics and a good quality brush, with the exception of the ones in the load box. I suppose that a small sponge could also obtain a similar result. I tried to represent dents and punctures made by small stones in and around the inside of the load box.

Other punctures and dents created as a result of loose stone and debris are added to the top of the cab. I also create some fine lateral scratches on the roof and the doors. Because of the rough environments the truck would work in, the front bumper and grille are suitable sites to draw chips of the most varied forms and sizes.

Next, I apply spots of white oil paint to all those

***29**. The accumulated dry mud in the wheels, the bottom of the load box and the mudguards is added using pigments of various earth colors and fixed with Humbrol enamel thinner. White oil paint blended with a soft brush help to create the dusty look of the surface.* ***30**. The left side headlight lens was left out to help illustrate a worn vehicle.*

areas that would be susceptible to the accumulation of dust and paint wear. I concentrate on high areas of the cab structure and the upper surface of the load box. The careful blending of the spots into the surface using a soft brush completes this technique. Once dry, this is complemented with an oil wash using Naples Yellow to provide dimension to the areas of greater dust accumulation.

This is followed with the application of Sepia colored spots. This is done to tone down certain areas were the dust effect is too pronounced, but also to increase the shading in certain low-lying areas. Again, careful blending of the spots a soft brush completes this technique.

An application of highly diluted Model Color acrylics follows. I use various natural tones and a diverse mixture of green and black. These are sparingly added to panel lines and small gaps, such as those in the doors, the edge of the cab, the chassis and load box.

I create rust effects with various dark brown tones on the bottom of the doors, the front bumper and the exhaust system.

The accumulated dry mud in the wheels, the bottom of the load box and the mudguards is added using pigments of various earth colors and fixed with Humbrol enamel thinner.

The lower areas of the chassis are heavily soiled with earth colors, using both acrylics and oils. Flicking the brush with a finger creates a very realistic "splash" effect. By varying the dilution of the paint it is possible to obtain more or less defined spots. The size of the brush and the hardness of the bristle also influence this technique.

The spilled fuel effects are created using a Titan oil color called "Betume."

The wheels take many washes with oils and acrylics, adjustments being made with pigments and then dry brushing with black and grays.

As I a final touch of wear and tear, the left headlight is shown with a broken lens. The right one received a Resicast gem.

To display the completed model, a small base is

MMiR RECCE

If you wish to build a COE GMC, here are the two Masters Productions kits that include the steel cab:

Masters Production 2.5-ton 6x6 model AFKWX33 15 Feet /Steel Cab and Canvas. Kit number 35039. Suggested retail approximately €112.00.

Masters Production GMC 1 ½-ton 4x4 COE with Leroi compressor. Kit number 35034. Suggested retail approximately €83.00.

Masters Production GMC Banjo Axles. Kit number 35028. Suggested retail approximately €14.50.

Mig Productions DUKW Suspension and Wheels. Kit number MP 35-016. Suggested retail approximately €21.30.

If you find yourself inclined, as I did, to create a rail truck, this is also an option:

Masters Production GMC rail wheels. Kit number 35036. Suggested retail approximately €10.50.

References

Panzer Aces Number 1: Accion Press

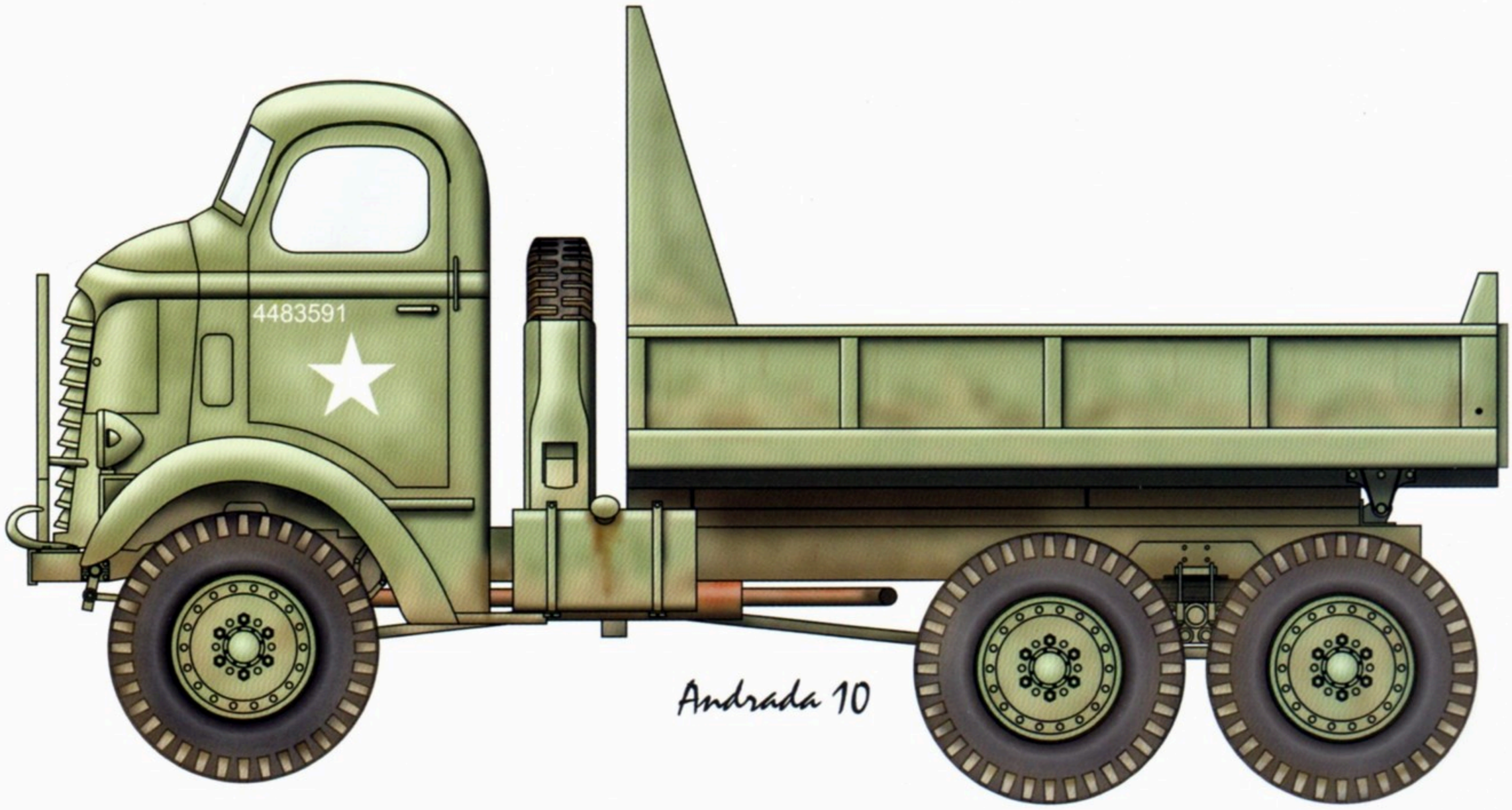
Wheels & Tracks Number 64: After The Battle

Military Armor International Number 5: M.A Editions

GMC CCKW 353 & 352: Frantisek Koran, Jan Mostek - Wings & Wheels Publications

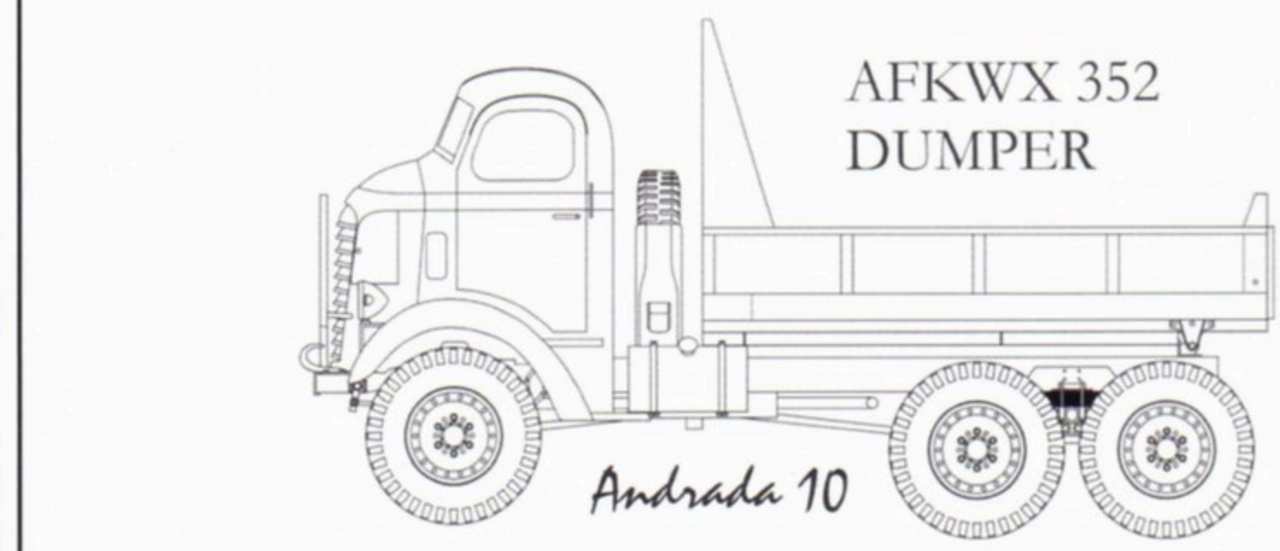
The GMC 6X6 and DUKW, a Universal Truck: Jean Michel Boniface, Jean Gabriel Jeudy, Foulis Military Book

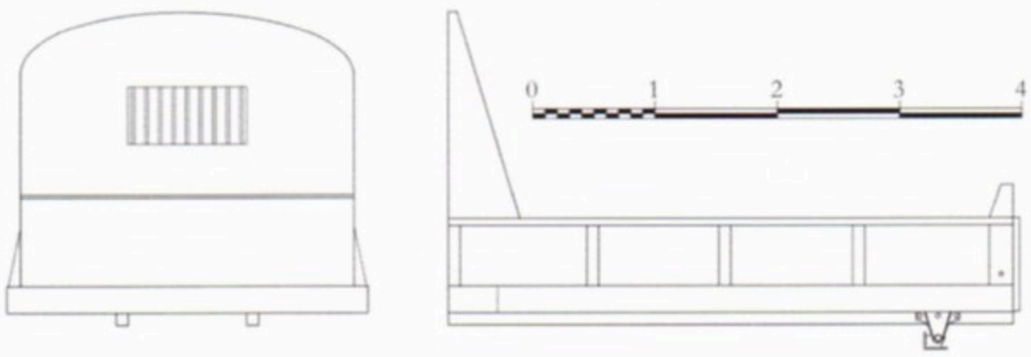
TM 0-801, Truck 2 1/2 ton 6X6 GMC CCKW 352-353.



made from a section resin cobblestone. A pleasing shape is rendered using a coping saw. The base is then painted and weathered and the edge is finished in black.

—Pedro Andrada and Michel Pérez





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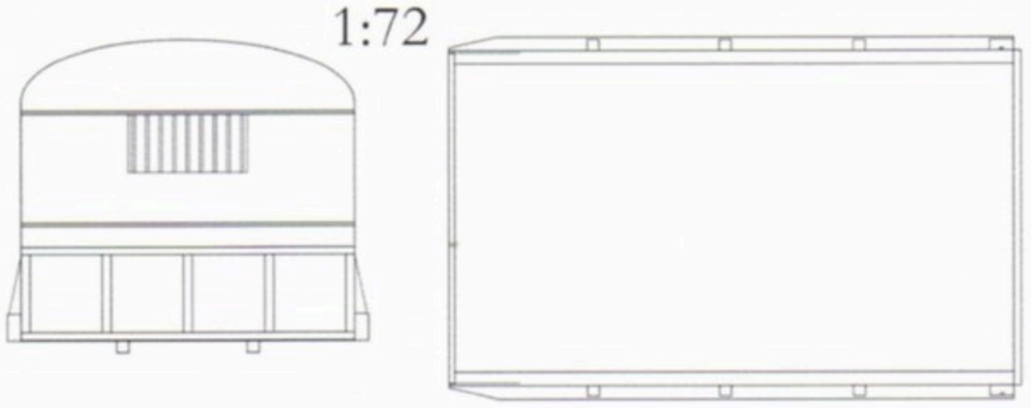
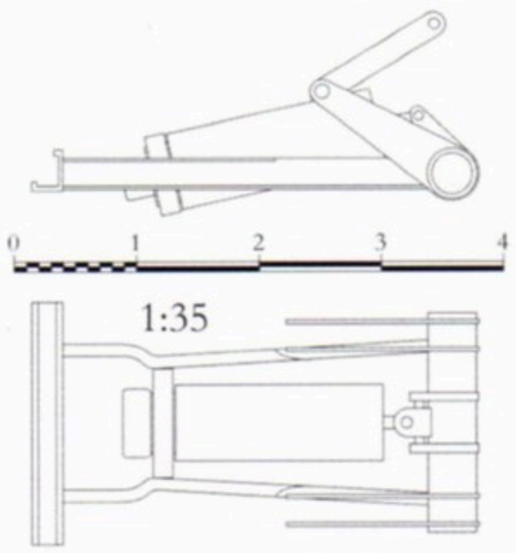




A PEEK AT WHAT'S NEW ON THE FIGURE FRONT

AC Models

The subject matter that Andrew Cairns covers runs the gamut, but being from New Zealand, Anzac (Australian and New Zealand Army Corps) figures are a particular favorite. **10B19, Anzac at Gallipoli 1915 (1)** is a 1:10 scale bust of a scruffy-looking infantryman from the WWI campaign against Turkey. The figure comes with two different styles of floppy "digger" hat. The box carried in his right arm is a periscope used to spot opposing snipers. He has a tobacco pipe in his left hand. The Australian WWI nine-pouch bandoleer and his ID tag are the most prominent uniform details. This is a really cool subject. The only gripes we had were that the hats could have fit the figure better and he could really use some hair. To learn more about AC Models, send an e-mail to **amcairns@paradise.net.nz**

Alpine

The 1:16 scale figures from Alpine are poppin' up like beautiful resin flowers.

16010, Fallschirmjäger Sniper (2) wears a superbly sculpted third pattern jump smock over his Fliegerbluse. You have a number of options with the smock as far as paint: reed green, splinter pattern camouflage (Splittermuster) or the softer-edged marsh pattern (Sumpfmeister). The same goes for the pants and Fliegerbluse, as you could do both in tan for the Mediterranean theater. The KAR 98k he carries was not specifically designed as a sniper rifle, but it had an effective range out to 1000m. Around 132,000 examples were made carrying either a 4x or 6x scope. Two heads are included, one with a camouflage cover on the Fallschirmjäger helmet and one without the cover.

Alpine has a peculiar fetish for SS guys from the Battle of the Bulge. **16011, Grenadier "Kampfgruppe Hansen" (3)** is straight out of the propaganda film and photos taken around Poteau on December 18, 1944. This trooper wears the M44 pea pattern camouflage blouse over multiple layers, as this garment was not known for its warmth. If you want to vary this a bit, keep in mind that the M43 blouse was identical in cut, but made from field grey cloth. The trousers are the same way, you could do field grey like the original film footage or pea pattern. His weapon is the Stürmgewehr, the first real assault rifle. You knew that. The head choice here is between the M36 helmet with or without the camouflage cover.

It's all about cold weather dogfaces in 1:35 scale. **35108, WW2 U.S. Infantry #1 (4)** seems to be hailing a cab. Prominent uniform details depicted include the M43 combat jacket, woolen trousers and the second pattern arctic overshoes. The arctic overshoes were often issued because the newfangled shoepacs were in short supply. Head choice is between bareheaded and one with the M1 helmet.

35109, WW2 U.S. infantry #2 (5) is the intimidating fellow chomping on a cigar butt. His getup consists of the M41 field jacket, and M43 OD green trousers. Head choice is between the depicted wool cap and one with and M1 helmet over the wool cap. 35108 and 35109 come as a set under stock number 35110, WW2 U.S.

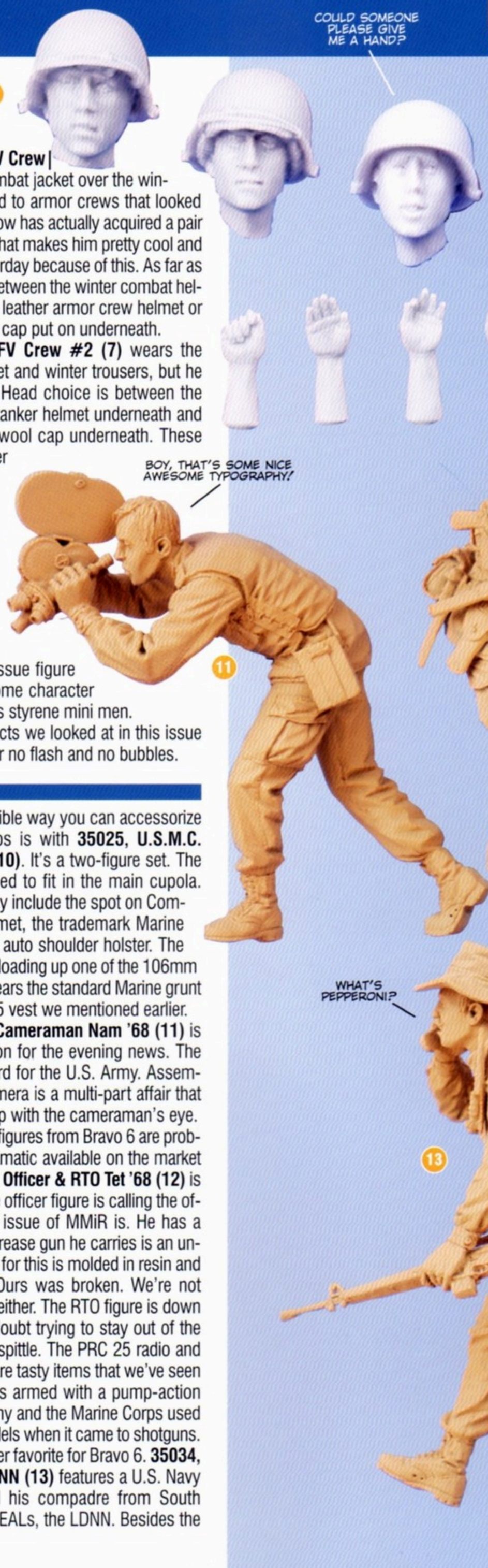
Infantry Set.

35114 WW2 U.S. AFV Crew #1 (6) wears an M41 combat jacket over the winter combat trousers issued to armor crews that looked like overalls. This lucky fellow has actually acquired a pair of the M1944 shoepacs. That makes him pretty cool and we bought him lunch yesterday because of this. As far as heads go, your choice is between the winter combat helmet used as a liner for the leather armor crew helmet or an M1 helmet with a wool cap put on underneath.

35115 WW2 U.S. AFV Crew #2 (7) wears the aforementioned M41 jacket and winter trousers, but he wears winter overshoes. Head choice is between the depicted M1 helmet with tanker helmet underneath and the tanker helmet with a wool cap underneath. These tanker twins are a set under the title 35116, WW2 U.S. AFV Crew Set.

Exercising your options is easy with **H003, Panzer Crew Heads & Hands (8)** and **H004, U.S. Helmet Heads & Hands (9)**. These are nice combos of spare parts from earlier issue figure kits, perfect for adding some character to those rather anonymous styrene mini men.

All of the Alpine products we looked at in this issue were excellent, with little or no flash and no bubbles.



Bravo 6

Perhaps the best possible way you can accessorize your new Academy Ontos is with **35025, U.S.M.C. "Ontos" Crew Nam '68 (10)**. It's a two-figure set. The commander figure is posed to fit in the main cupola. Standout details on this guy include the spot on Combat Vehicle Crewman helmet, the trademark Marine M55 flak vest and the .45 auto shoulder holster. The second figure of this set is loading up one of the 106mm recoilless rifle tubes. He wears the standard Marine grunt uniform including that M55 vest we mentioned earlier.

35032, U.S. Military Cameraman Nam '68 (11) is busy covering all the action for the evening news. The M52 flak vest was standard for the U.S. Army. Assembly is a little tricky. His camera is a multi-part affair that takes some effort to line up with the cameraman's eye.

The "Tet '68" series of figures from Bravo 6 are probably some of the most dramatic available on the market today. **35033 U.S.M.C. (6) Officer & RTO Tet '68 (12)** is another two-figure set. The officer figure is calling the office wondering where his issue of MMiR is. He has a mustache. Cool. The M3 grease gun he carries is an unusual detail. The butt stock for this is molded in resin and is perhaps too delicate. Ours was broken. We're not whining, so you shouldn't either. The RTO figure is down on hands and knees, no doubt trying to stay out of the way of the officer's flying spittle. The PRC 25 radio and photo-etched pack board are tasty items that we've seen from Bravo 6 before. He is armed with a pump-action shotgun. Both the U.S. Army and the Marine Corps used a variety of makes and models when it came to shotguns.

Navy SEALS are another favorite for Bravo 6. **35034, U.S. Navy SEAL (2) & LDNN (13)** features a U.S. Navy SEAL radio operator and his compadre from South Vietnam's version of the SEALs, the LDNN. Besides the

awesome mustache and radio, the U.S. SEAL is also wearing a life preserver—an interesting detail. The LDNN sports the sharpest headgear seen in mini-men in a while. On the box top, he is illustrated with a blue t-shirt, but we were thinking you could also put a smiley face or something on there. The web gear is of U.S. origin and he carries the XM177 CAR 15 carbine.

If you want to find out more on Vietnam uniforms and equipment, we highly recommend a visit to **www.vietnamgear.com** or **http://david.brubakers.us/Vietnam/index.html** as they are the best reference we've been able to dig up. As usual for Bravo 6, all figures featured exquisite detail and sculpting. There are a few air bubbles to fill and you'll want to exercise caution with some of the small, delicate parts.

Doug's Original

We continue to dig out from underneath the pile sent from Doug's Original. **35030, D.A.K. Sitting on Wheel (14)** is just sort of hanging out. He wears the early issue high boots and shorts and is perfect for your new Dragon Panzer IIIH.

35031, French Infantry (15) is sort of unique, as most French infantry are modeled with the overcoat on. He sports the khaki-colored M1920/35 uniform and the MAS M1936 carbine. Both of these figures were easy to assemble. Casting was flawless except for a small seam line on the inseam of the D.A.K. soldier's shorts.

Dragon

6538, Gebrigspionier Metaxas Line 1941 (16) is a four-figure set. These guys aren't just mountain troops, but sappers as well! Just to fill you in a bit, the Metaxas line was the Greek version of the Maginot Line. It was built along the Greco-Bulgarian border to protect them from a re-armed Bulgaria. During the German invasion of Greece in April 1941, mountain troops attacked these fortifications but had little success. Like the Maginot line, the Germans ended up outflanking Metaxas line.

Now back to the figures. The uniforms and web gear are the same as you would see on Wehrmacht troops in 1941-2 with the exception of the distinctive Gebrigsjäger mountain boots and puttees. You could easily make these into regular Wehrmacht infantry by switching the footwear to high boots. Unique accessories include grenade bags for one soldier, wire cutters for another and a Bangalore torpedo type explosive device. Our favorite for this set was the prone figure with the wire cutters. These figures are the same as other sets from Dragon with separate heads, arms, legs and torso.

Hobby Fan

Hobby Fan comes up with another set for the AFV Club Stuart. **HF595, U.S. M5A1 Tank Crew & Sandbags (II) (17)** is a combo set that includes a tank commander manning the .30 caliber top-mounted machine gun. He wears the M41 combat jacket, herringbone twill trousers and tanker crash helmet. The one-piece resin sandbag set (not pictured) is tailor made to plop onto the glacis plate of your M5.

If you're in the mood for something more current, check out **HF597, U.S. Ranger (III) Sniper Team "OIF" ISAF (18)**. One sniper takes aim with an M24, which is the sniper version of the venerable M14, while the other uses what looks like an M24, which is based on the Remington 700. Both wear the Army Combat Uniform, the Advanced Combat Helmet and the Modular Tactical Vest. The base and rucksacks are also very nicely done.

Hobby Fan figures are a little large compared to other offerings. We figure they are closer to 1:33 scale, so be careful about integrating them with figures from other manufacturers. That being said, the figures we have looked at lately are beautifully modeled and a breeze to assemble.

Mantis

Mantis cashes in on the perennial popularity of SS dudes in winter dress. These guys are an excellent choice for a Battle of the Bulge diorama. **35025, SS Panzergrenadier #1 (19)** wears a nicely done second pattern camouflage smock (this type had those distinctive loops on the shoulders and sleeves) and carries the G43 semi-automatic rifle.

35026, SS Panzergrenadier #2 (20) has a reversible padded jacket on and carries the ever-popular Stürmgewehr assault rifle. The barrel on his rifle came busted. Other than that, we thought these two figures were just dandy. They come as a set under the title 35027, Ambush.

In addition to humans, Mantis does some cool little animal sets. You can find these under the Akcesoria heading on their website (**www.mantisminiatures.pl**). **35028, Animals- Set 7 (21)** is a taste of seaside flavor with several marine birds, some seals, a crab and a half-eaten fish. Yum! The carrier blocks on these little animals were very hard to remove, especially on the crab. The feet on the birds were very delicate too. That being said, this set is the most original thing we saw for this installment of Mini Men. Pat made earrings for himself out of the crab and the fish.

Master Box

3576, Iraq Kit 2 (22) is a set of four Middle Eastern types that look like they are up to a bit of no good. It even includes a smarmy looking kid pointing something out. The ever-popular AK47 provides armament for these guys, but a Dragunov sniper rifle is also included as an option for one of the guys, so we stuck that on. By the way, the best way to tell an AK47 from an AK74 in 1:35 scale is the flash suppressor. The AK74 has a long one and the older AK47 has a much shorter one. The box top for this shows these guys in a mix of military surplus and athletic clothing, including some nice sneakers on the two standing figures. As usual, Master box gives you a great theme and the figures are laid out like other plastic

manufacturers with separate heads, legs, arms and torso so you can convert them without too much fuss. The weapons and equipment in this set looked okay to us, too.

Mig Productions

Mig Productions provided us with an opposite number to the Master Box set just mentioned. **35-330, Blackwater (23)** reminded us of Cobra Commander from the old GI Joe cartoon. In addition to his customized M4 carbine, this mercenary raided the latest U.S. Cavalry catalog before shipping out. He's literally covered in gear! Equipment and uniforms for these mercenary troops varies widely, so you have a lot of options for painting. The sculpting was... well, look for yourself. It's great. Go get one today. 'Nuff said.

Mini Art

Figure sets with British/Commonwealth themes are enjoying quite a bit of popularity lately mostly due to all of the awesome limey armor coming out. **35083, British Royal Engineers (24)** give you four blokes depicted clearing and/or laying mines. The first figure is doing things the old-fashioned way, poking the ground with a stick. The second Tommy follows with a shovel. The third figure is equipped with the Polish Mine Detector designed by Jozef Stanislaw Kosacki. This detector was a technological breakthrough as it weighed only 30 pounds and could be operated by just one man. The last figure in the lineup appears to be taking the cover off a new mine. The parts breakdown is the same as for Dragon and Master Box so conversions should be easy. The British Serge Battledress, helmets, and M1937 web gear are all fairly well molded for styrene.

Miniman Factory

Miniman Factory has made a little niche for themselves in our hobby with their U.S. and Russian truck kits. Now they have delivered on the perfect accessory. **F001, Female Driver Modern U.S. Vehicle (25)** is great for a number of purposes as female drivers abound in the U.S. military these days. We liked the relaxed pose on this figure. Assembly is really easy. You just add the forearms to the main casting.

Royal

Royal really astounded us with this one. **608, Kübelwagen Driver (26)** is a very dapper looking fellow who comes with a choice of heads. You can either go bare headed as seen here or fill the collar with the same head with an overseas cap on. He is made to fit into a vehicle with a forward opening door, like the Kübelwagen. We can also see him in the new Master Box or Mini Art Mercedes Typ170. This figure is a classic. We'll wait here while you go order your copy.

SKP

SKP from the Czech Republic has been turning out some WWII Betties lately. This is our first chance to get a closer look. **112, Wren Mary is from the British Women's Royal Naval Service (27)**. The Wrens performed a number of duties for the Royal Navy including flying transport planes. The organization had 75,000 members at its peak in 1944. This is a very accurate rendering of one of the uniforms they wore. The color was a very dark blue with lighter blue rank insignia and cap badge. Overall, casting quality was very

nice aside from some air bubbles and cleanup needed on the legs. Mary likes the puppy and we do, too.

Toro Model

35F31, Soldier with Submachine Gun (28) is a continuation of Toro's Polish Army in Afghanistan series. He is armed with the Mini Beryl, a compact version of the Polish 5.56 Beryl assault rifle. Like other figures in this series, he comes with insignia decals and small full color painting guide with pics of the painted figure and real soldiers.

Master Box served us a Donkey-ridin' Arab in MMiR 53. Now, Toro delivers a more Afghan-flavored version of the same subject with **35F36, Donkey Rider (29)**. The donkey even comes with poseable ears. The casting quality of both figures was good and there were no problems with assembly. Toro figures scale are a bit larger than 1:35 offerings from other companies.

Ultracast

Ultracast has been quiet for a while, but now they are back with one of the nicest tank commanders available today. **35052, SS Tiger Tank Commander 1944-45 (30)** is a multi-pose figure that comes with two heads (with and without headset), three right arms and two left arms. We do not recommend trying to attach all of these to the same figure. Prominent uniform details include the one-piece camouflage reversible camouflage coverall issued from 1943 onward and the nicely done SS officer's cap. Although is states in the title that he's made for a Tiger, he would look equally at home in the cupola of any late war Panzer, winter or summer. Casting quality was outstanding.

Zvezda

Zvezda has been making great strides in 1:35 scale lately. We can't wait to see their T-90. Anyway, let's get back to the figures...

3627, German Infantry Eastern Front Winter 1941-42 (31) is a four-figure set of Jerry's fighting in the cold. These figures are a bit tricky to assemble. This is the sequence we recommend: 1. Put the legs together. 2. Add the greatcoat pieces to the legs. 3. Add the torso and the accessories around the waist. 4. Add the arms. 5. Add the head.

We liked the poses in this one and thought they would be a good companion set for the Tamiya German Assault Infantry with Winter Gear released a few years ago. After you fill in the gaps on the greatcoat parts, these figures should look great. Picky modelers may want to replace the KAR 98k rifles, as they look a bit funky.

The manufacturers submit all of the samples for Mini-Men and for this, we are very grateful. The exceptions this time are Master Box, which were submitted by Dragon USA and Mini Art, which were submitted by MRC.

ASCZ WRECKIN' BALL

It's heavy wreckin', Accurate Armour style!

Wreckers: I can't get enough of them. WW2 to present, wheeled or tracked; these are my all time favorite subjects to model. Currently, the only wrecker in 1/35th scale is the old stalwart Italeri M32. As you may know, this is about to change with the imminent release of the Tasca M32.

For a styrene wheeled wrecker there is only a dream. If you want to play recovery, you have to man up and play in the resin sandbox. It is here that you will find the goods. Unfortunately, some of the offerings are good and some are downright terrible. The reason I say sandbox is because as you dig in the sand to build your castle you might just dig up a dog turd that will send you crying for your mommy to wash your hands of the offending turdiness. How do I deal with these stinky surprises that lurk beneath the surface? Gloves, baby! Gloves.

Luckily, some manufacturers, in this case Accurate Armour (no gloves required) have continued to supply the wrecker love. Whether it be British or American, we have a few to choose from. For this article I will go full Superdope on the AA Diamond T 969 4-ton Wrecker. This kit was released a few years ago first as the hard cab (early) and then shortly thereafter the soft cab (late). Both versions served side by side up until Korea and then were replaced by the Reo 5-ton series of trucks. I couldn't decide which to do so I ordered a soft cab from AA to go with the hard cab I already had.

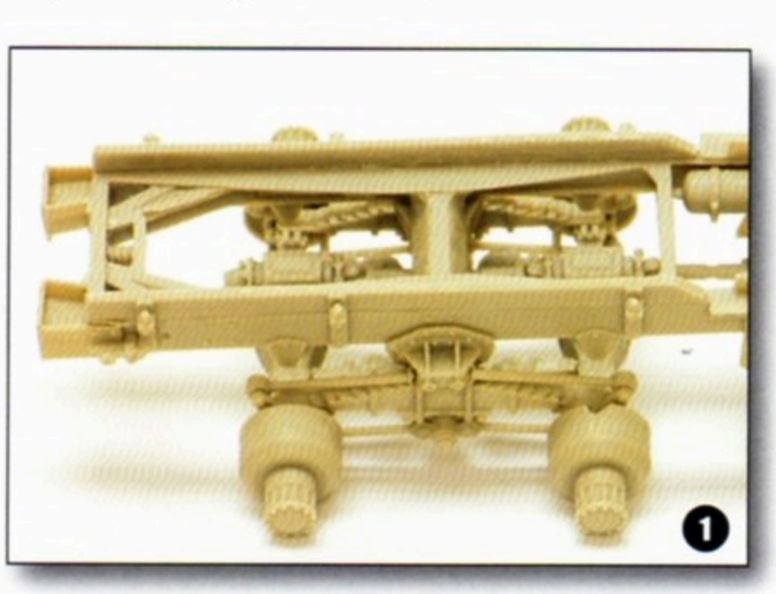
The kit is a true multi-media extravaganza; resin, brass, white metal, chain, string, and a full compliment of markings for British, Commonwealth, and U.S. The instructions are clear and well laid out, but I must warn you now: this kit is not for beginners in resin, and even some with experience in multi-media will need to have the skills to garner the most out of this kit.

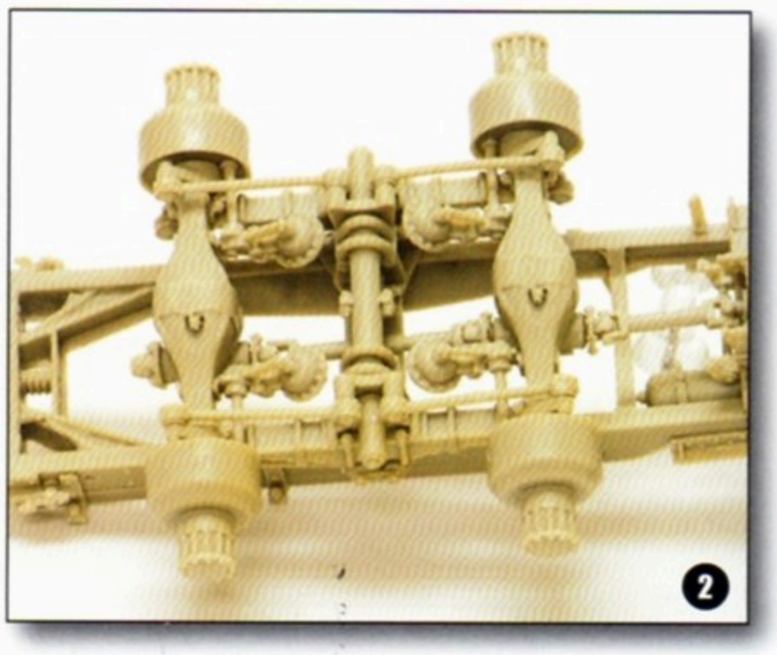
[Editor's note: although Tony's text is complex at times, especially in regards to the construction of the booms and their tower, I feel it is essential to anyone building this model.]

No lame frame

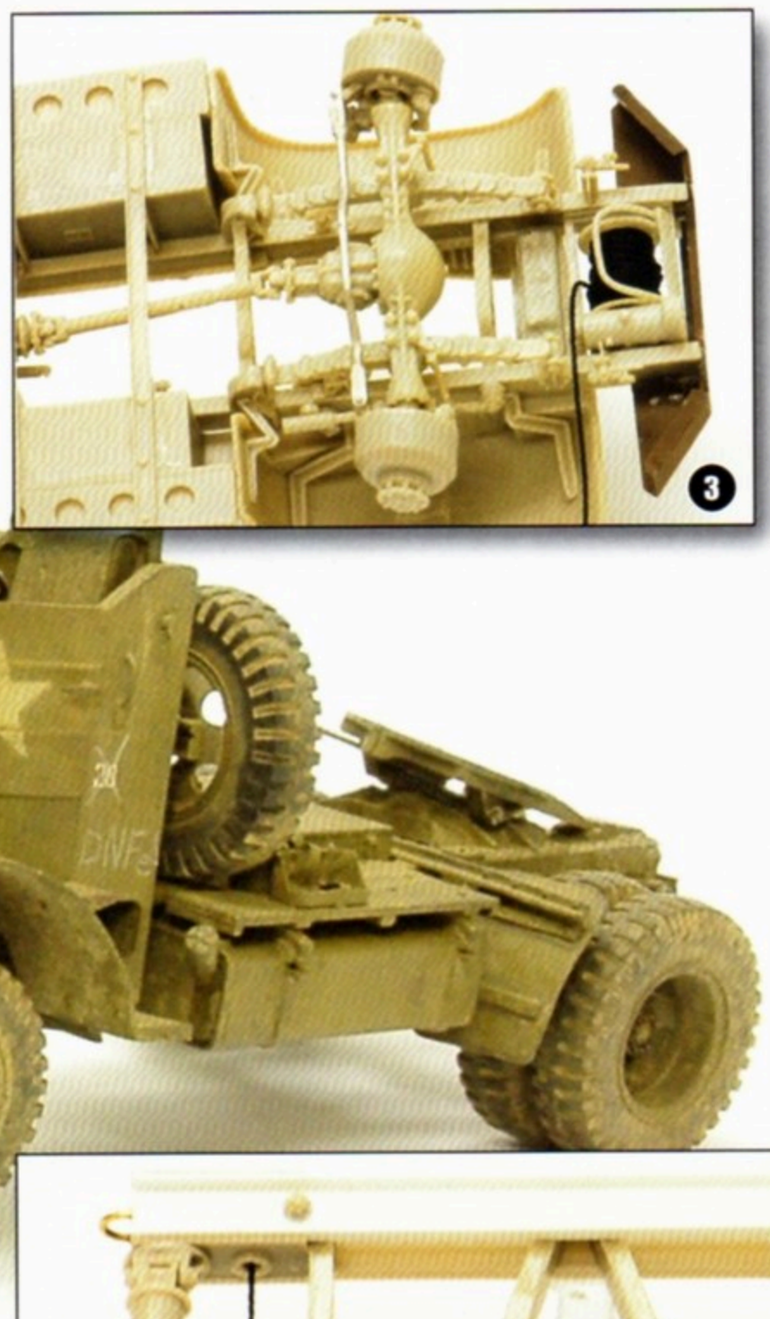
The frame for the 969 is a very detailed dealio made up of a complex series of components for the rear suspension and a nicely depicted front suspension. Clean up of all the parts takes some time, as some pieces are quite delicate. The rear suspension can be posed over rough ground but the base used must be locked down first because the suspension will not articulate on its own.

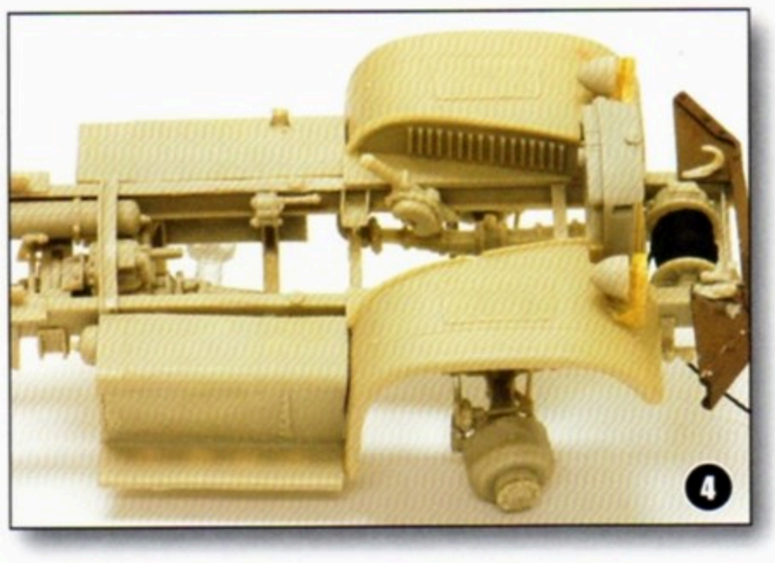
I choose to keep all the wheels level and build all components for the rear loose until I have the wheels for the front and rear mocked up. Once all are touching the ground and true, I lock the rear in place with super glue. I then go in and add all the track rods and propeller shafts. This adds all the

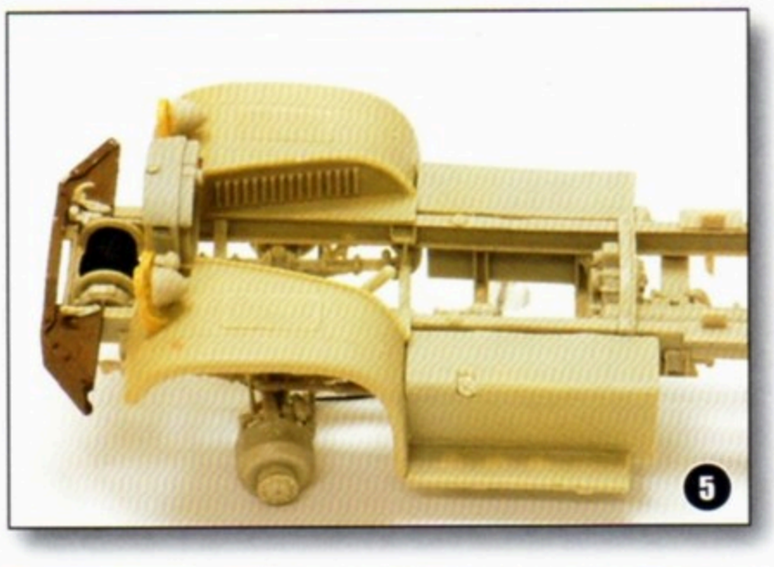


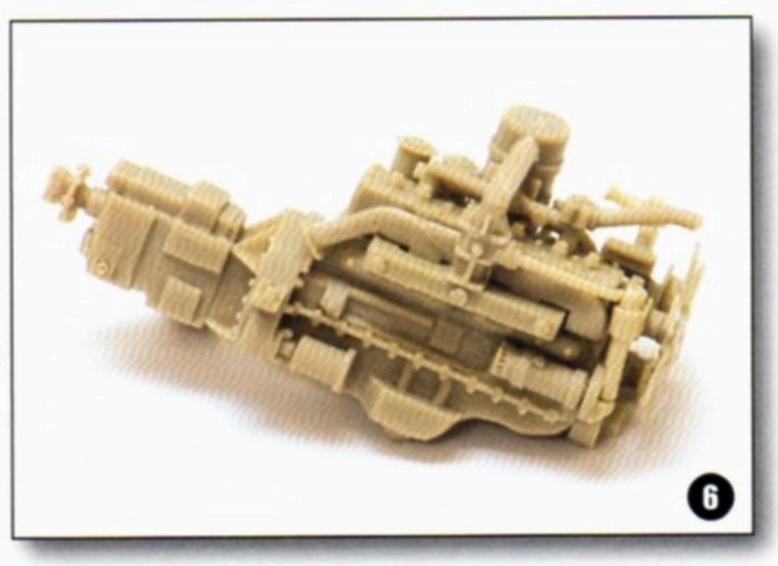


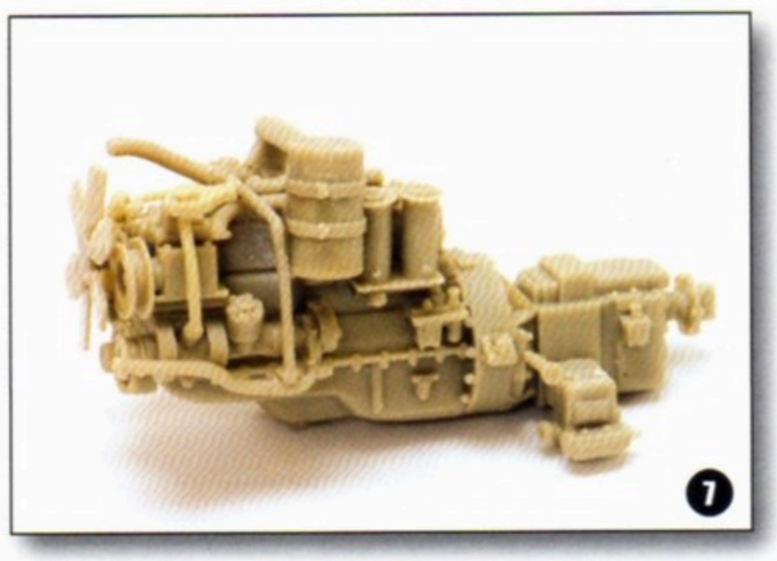
***1.** The frame for the 969 is a very detailed dealio made up of a complex series of components for the rear suspension and a nicely depicted front suspension. **2.** Clean up of all the parts takes some time, as some pieces are quite delicate.*

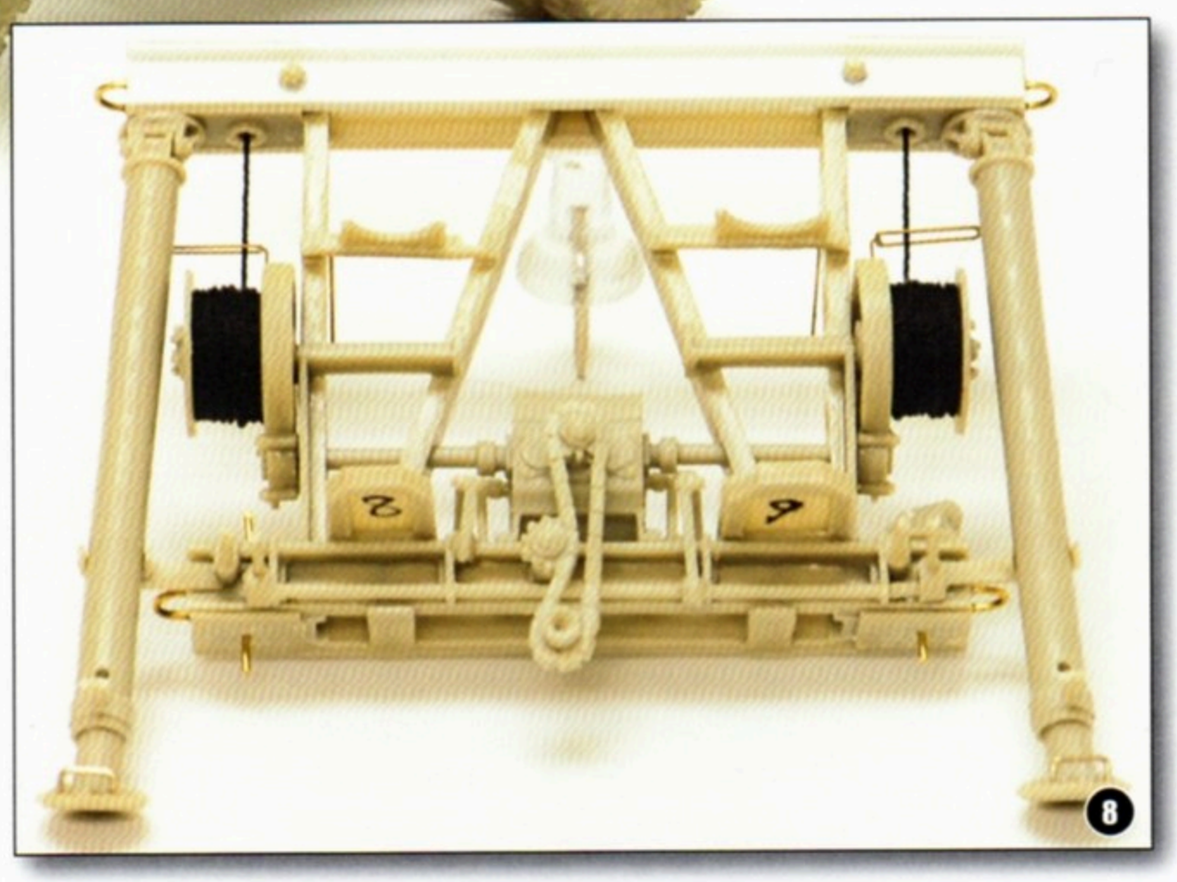


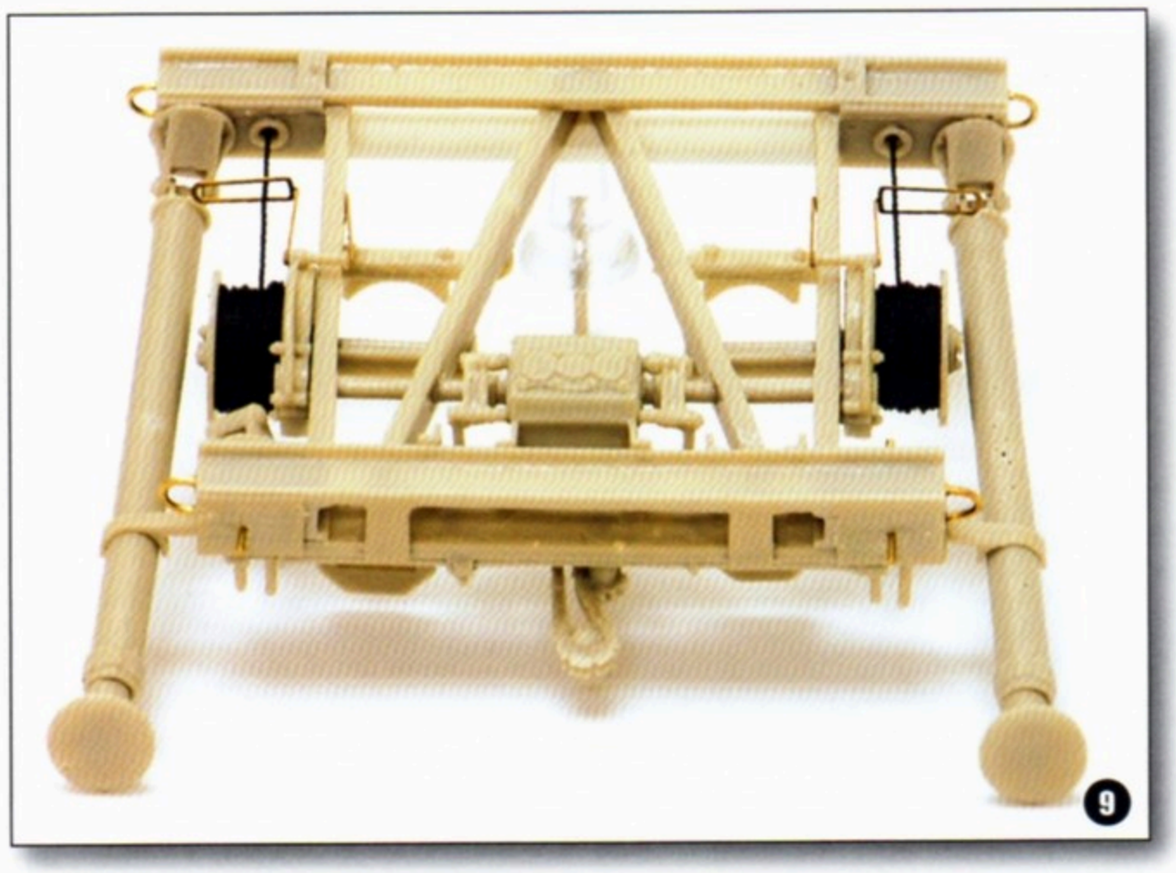












3. *The front suspension receives shock absorbers, steering rods and a pitman arm. Unfortunately, the front steering mechanism cannot be made workable.* **4**. *The left gas tank and right battery box are set into little tabs on the frame rail that fit snug into channels on the insides of these boxes.* **5**. *The front fenders have small locating pins that line up to the frame rail guide holes. Each front fender has three added supports that are glued in place.* **6**, **7**. *The Hercules RXC motor is comprised of 18 pieces. It's possible to go crazy: super detailing with wire and hoses but I leave mine alone because I choose to close the hood.* **8**, **9**. *The support tower. This is where the truck stops and the wrecking show begins. This is a complicated piece of equipment in real life and building a smaller version is not easy. The clean up of all the support frame and winches takes over a week.* **10**. *The beautifully rendered boom roller brackets.* **11**. *The center boom tubes are made of white metal and have to be carefully cleaned up and burnished. They are among the most challenging parts I have ever built. A friend informs me that soldering is the proper method for the booms and this is the result.*

strength to the rear bogie. The front suspension receives shock absorbers, steering rods and pitman arm. Unfortunately, the front steering cannot be made workable so I lock it in a mellow left hand turn. This completes the suspension of the truck.

Next up are the left gas tank and right battery box. These are set into little tabs on the frame rail that fit snug into channels on the insides of these boxes. The transfer case is nicely cast with some multiple piece action going on. Part of the transfer case rests on a main spar and the other end slips into the rear most channel on the side boxes. Once the side boxes are on I can now add the front fenders. These have small locating pins that line up to the frame rail guide holes. Each front fender has three added supports that are glued in place. The front winch is nicely represented and once the winch drum is wound with kit supplied string the whole assembly slips into the inside of the front frame rails. The front bumper is glued on along with the front tow hooks and front airline couplers. Now I proceed around the frame and add all the ancillary bits: exhaust pipe, rear airline couplers, steering box, front radiator and grille, and all the rear brake diaphragms. I decide to wait until the end of the build to add the headlights and their super delicate guards.

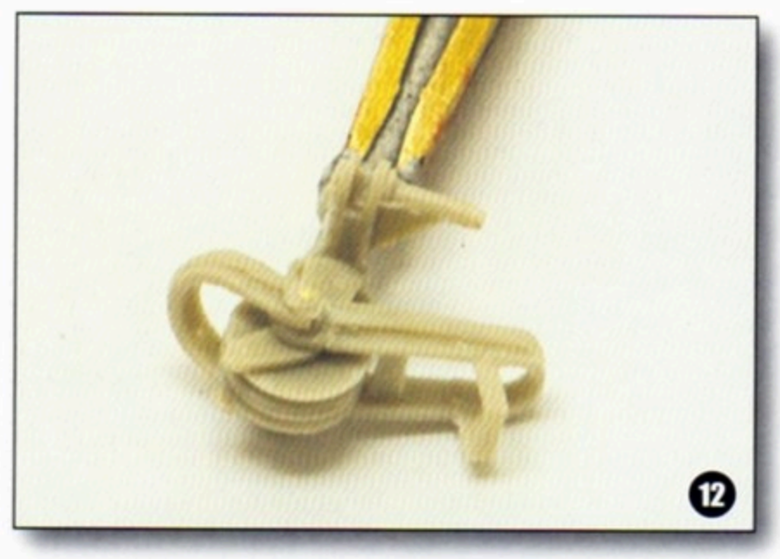
Put that Herc to work

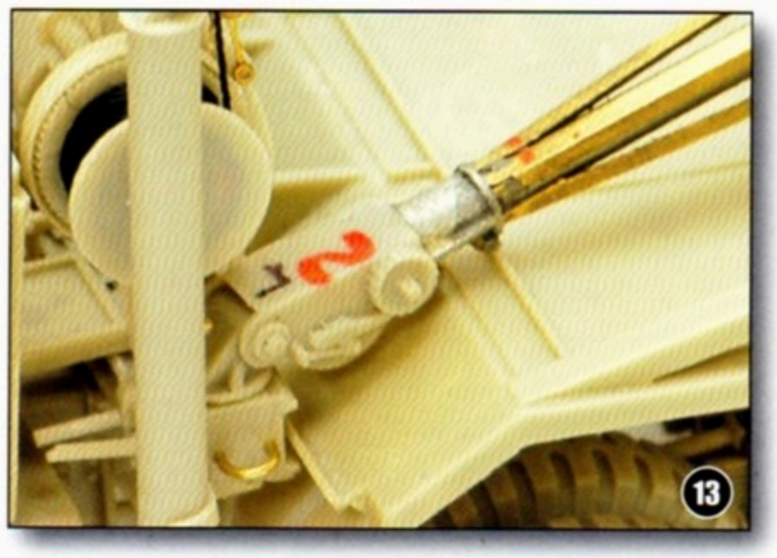
The Hercules RXC motor is definitely a model in itself. Comprised of 18 pieces, I spend some time here eyeballing the placement of everything. Some pieces, like the exhaust, intake, starter, and water inlet are no brainers as to where they go, but a slight misalignment of other pieces throws multiple things out of whack. I take my time and make sure all is according to the pictures in the instructions. It's possible to go crazy super detailing with wire and hoses but I leave mine alone because I choose to close the hood.

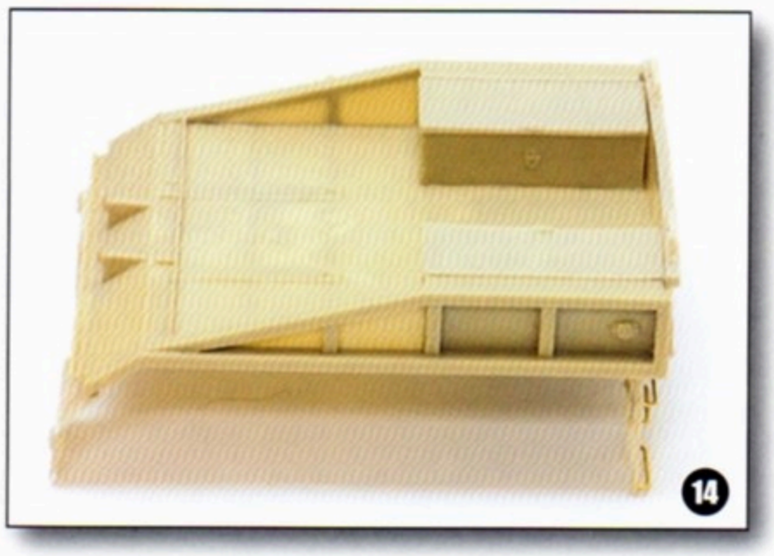
What up Holmes?

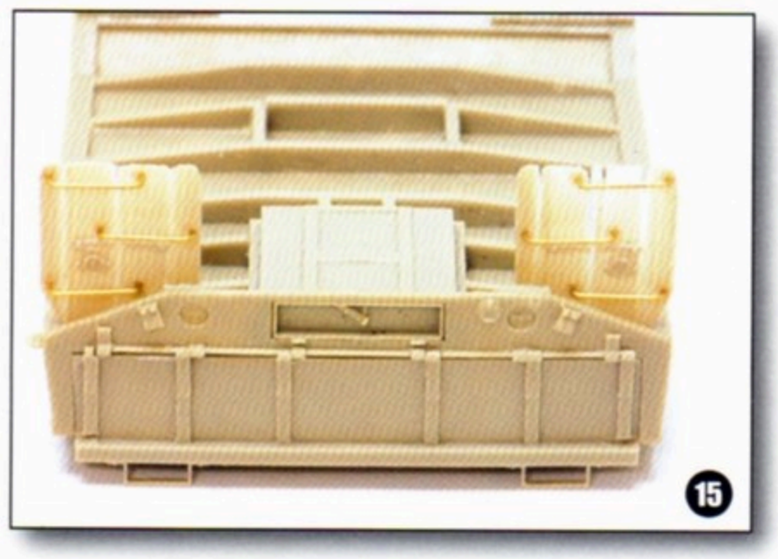
This is where the truck stops and the wrecking show begins. It is important at this point to stay focused and under no circumstance rush through it. This is a complicated piece of equipment in real life and building a smaller version is not easy. The clean up of all the support frame and winches takes over a week. I have some transport damage of small pieces in the bags. I have to carefully mull through the crumbs at the bottom and try to fix the broken bits before I start the build of the support tower.

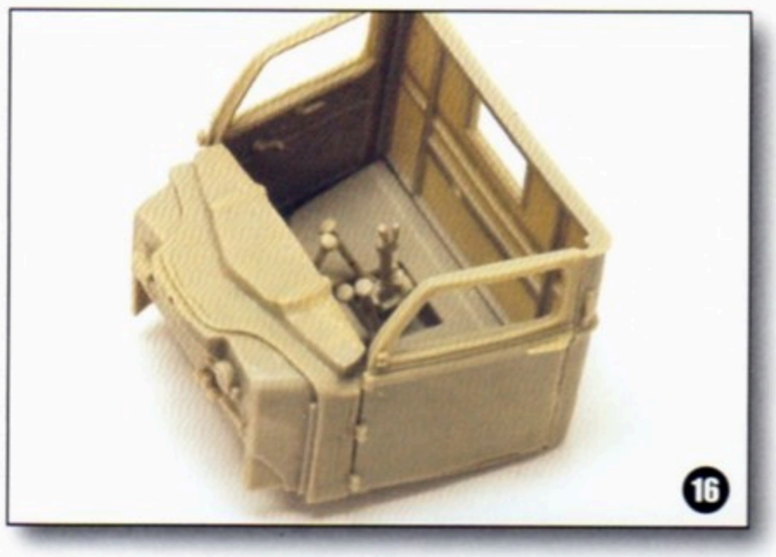
First up are the companion plates (110 and 111) that support the tower on the chassis. I make sure they are glued straight and level and then start the tower. I deviate from the instructions by only assembling the sturdy parts; 173, 174, 175, 76. These are all the horizontal bars and welding tank holders. The upper top brace is also added. I then add all the lower braces; 112 through 115, and the lower

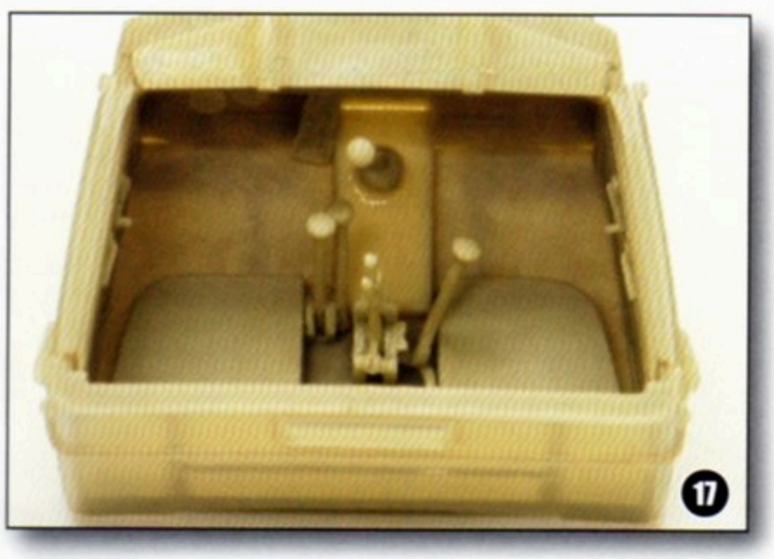












12. *The resin boom roller brackets in place. These have been pinned to ease the rigging process.* **13.** *The base of the booms in place on the support tower.* **14.** *The bed is pretty simple and presents no real surprises.* **15.** *I bend all six of the stepping rungs for the rear mudguards. My mudguards are little frazzled on the bottom from being so thin.* **16-18.** *Since I have both cabs on hand, I decide to build both. This way I can decide after painting which one to use. The hard cab is a multi piece affair with a front*

supports for the welding bottles. The stabilizing leg supports (116) are left off until later as these are very delicate on their own.

I then prep the cable drums by winding them with tape to take up space on the drum before I wind them with string. I glue the drums to the eccentric brake assembly making sure when I wind the string it is going in the right direction. Before I glue the cable drums on, I drill the upper cable guide mounts for the passing of string. I also drill the bottom for the boom support pivots. Doing this early makes things easier later when assembling the booms and reeving the cables.

While I am in drilling mode I also drill and pin the cable rollers, cable guides, boom lifting flange, and the boom roller bracket. These pieces make up the top right and left boom cable ends. On the tower I drill and pin the top cable guide, roller assembly support, and the cable roller. Having these workable is important because I will need to set my cable guide angles once the towed vehicle is in place. Planning ahead keeps my chances of disaster to a minimum.

Now I can add all the last linkages for the cable drum power distributor and the PTO drive. Small photo-etched cable guides are added for each cable drum. The welding tanks and spotlights will be added after paint. This completes the basic form of the boom tower but there is still plenty to do.

Fussy boom-booms

The center boom tubes are made of white metal and have to be carefully cleaned up and burnished. I can tell at this point the boom story is about to get tricky. Once both of the tubes are cleaned and ready it is time to fold all of the boom support angles into a ninety-degree angle lengthwise and add a small kink to the center. I try to superglue them in place and this is just not working at all. I try to get the brass to hold on the white metal and even with the correct fold in the center the tension won't let it stay in place. Now imagine trying to put four of these angles on the tube!

I am at the end of my patience when a good friend who had also built the 969 steps in and suggests soldering them. He informs me that this is the proper method for the booms and I said, "really? Prove it" Two days later some nicely soldered booms are in my hands ready for the next step.

The tricky part of the booms is making sure both ends (support pivot, reeving end) are properly indexed with each other in relation to the angle spars that run the length of the boom. It is also mandatory to have the boom end housings (135 right, 136 left) indexed to each other. Carefully studying the instructions I am able to decipher the proper placement and glue both ends to the booms. Once these are in place I am able to glue on the multi-part cable guide ends that I drilled and pinned earlier. These also have to be properly positioned. I thought that they would be vertical but they are not and have to have a slight canter on the boom end.

Later when the booms are in place this canter will allow both ends to have the proper correlation to the cable. I know, weird and confusing, but fear not my wreckies, as we are past the hardest part of the build! I set the booms aside and start on the bed of the 969. I add the storage box lids and the tailgate, all in the closed position and add the small photo-etched chains for the boxes and some small chain for the gate.

I bend up some small D-rings for the cable retainers that hold the cable hooks in the traveling position. While I am in bending mode I bend up all six of the stepping rungs for the rear mudguards. I glue the mudguards on first, then the steps. My mudguards are little frazzled on the bottom from being so thin, but there is not much I can do about it, so I move on.

The rest of the bed details are pretty simple and present no real surprises. An air compressor comes standard on all Diamond T's and it is either a Kellogg or a De Vilbiss. AA supplies the De Vilbiss and it is a very nice little unit. I have the choice of placing it underneath the aft support frame or on the side of the bed. I go for underneath the frame. The aft support frame is supposed to have two stacked spare tires but I choose to put three Scale Hardware bolts on the frame as studs in case I don't want any spares in place. The compressor and aft

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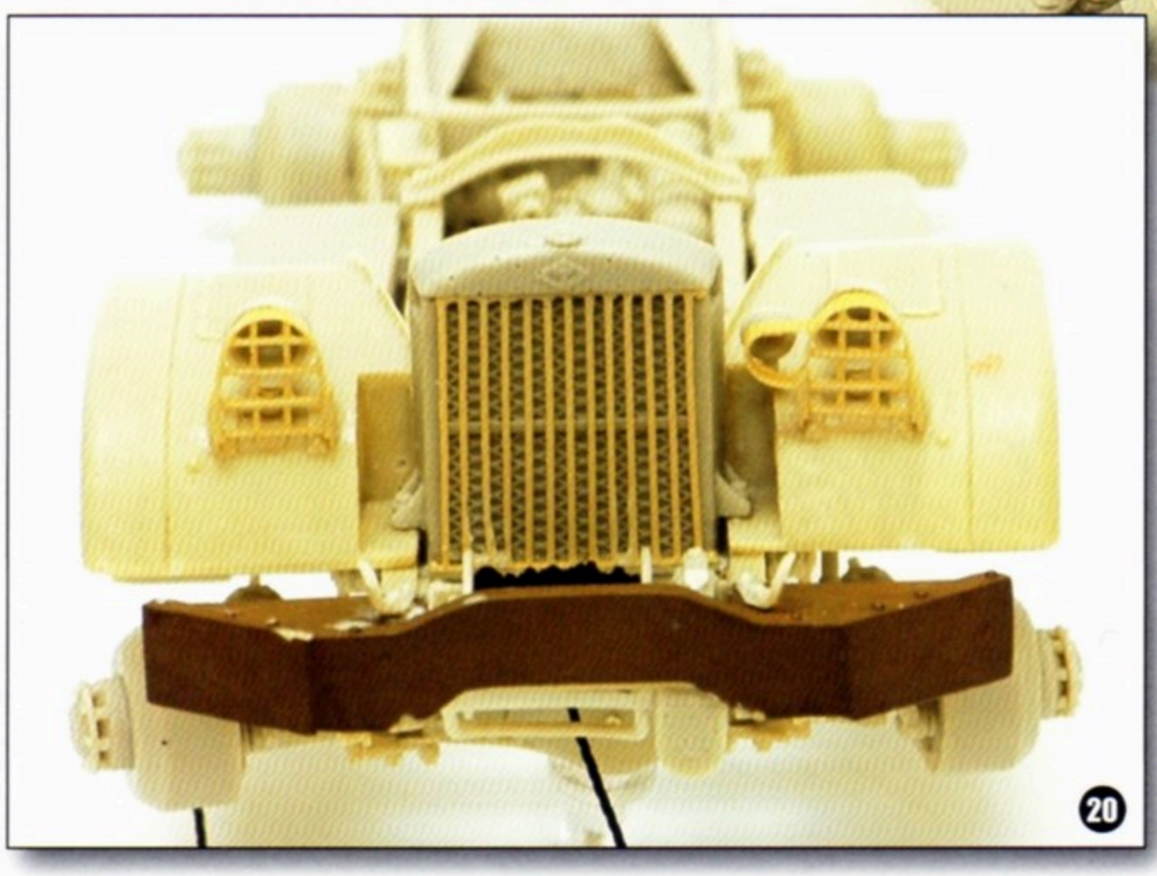
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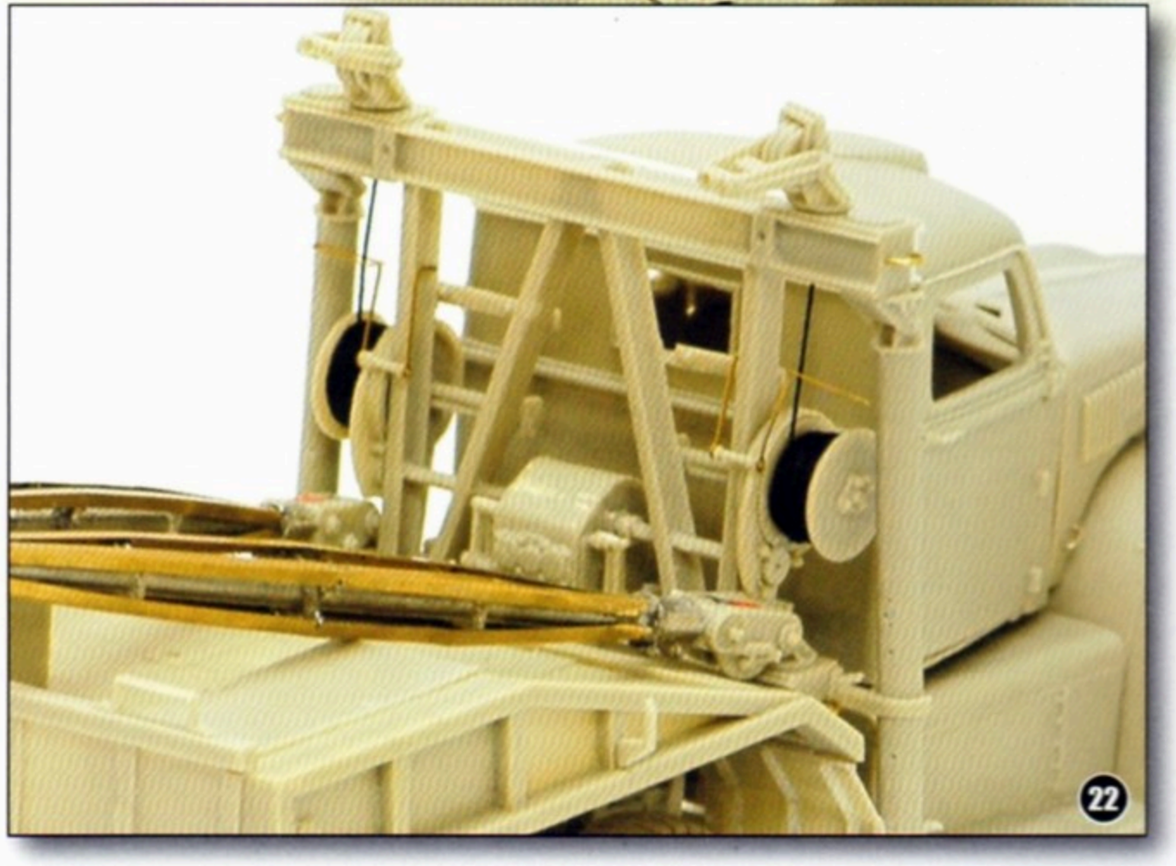
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firewall, floor, back wall, and roof. The doors are separate for both cabs. **19**. *The soft cab has two main pieces; the front firewall and the rear tub. For this cab I go one step further and add the M36 ring mount.* **20**. *The front winch is nicely represented and once the winch drum is wound with kit supplied string the whole assembly slips into the inside of the front frame rails. The front bumper is glued on along with the front tow hooks and front airline couplers. The super delicate light guards are added last.*

21,22. *With all the basic components complete, I am ready to paint. Note that the winch cable is loose and the main booms are still to be rigged.*

support are left off until after painting is complete.

I assemble the side strut supports and add the required amount of chain and hook for each support leg. I am finally able to add the fragile stabilizing leg supports to the main support frame and glue the legs in place in the stored position.

I'm on cabaticle

Since I have both cabs on hand, I decide to build both. This way I can decide after painting which one to use. That being said, it is time to clean up all the inner cab details for both cabs. AA covers all the bases for the controls and I spend some time adding all the shifters, e-brake, and pedals. I wait to add the seats after painting to ensure the entire interior is painted. The soft cab has two main pieces, the front firewall and the rear tub. The hard cab is a multi piece affair with a front firewall, floor, back wall, and roof. The doors are separate for both cabs. For the soft cab I go one step further and add the M36 ring mount. It would be nice if the hard cab has the M56 mount option but it doesn't. The nice thing about the cabs is that the dash panel is a separate piece, so this can be added after paint and decals are applied to it. I choose to do only one dash panel with decals, as only one cab would get the nod. The last piece of bodywork is the three-piece hood. I add the four grab handles to each lower corner of the hood sides. At this time pretty much all the main components are done for the wrecker and everything can be primed and painted. The final assembly and rigging will be done after painting and markings are finished.

A little buddy for the 969

The Des kit Autocar 7144 has been previously covered here in the pages of MMiR, so I won't be covering much of the build here. I build the 7144 completely out of the box and this one will be my fifth Autocar from Des. They are a pleasure to build to say the least. Clean up is minimal and there are no issues or surprises to hamper the build. The only modification to the truck is to convert the front hubs and to change the wheels and tires. I use some front hubs from the AA Diamond T cargo truck and pilfer the required rims and tires. I choose to do this because there is a noticeable difference between the Des 9x20's and the AA ones from the wrecker. This is one of my peeves when combining different kit manufacturers trucks and it can be easily remedied by swapping out the tires for more accurate ones. A model on its own might not reveal a difference, but when putting two together any size or design differences become apparent. All the assemblies for the Autocar are now thrown in the priming pile.

O.D. elish

Priming for the 969 and 7144 is done with Tamiya AS- Olive Drab. I have stopped priming with darker base colors, as I find the shading thing with a darker base doesn't really work for me anymore. I would rather nail the shading with tonal variations added to the final top color.

After a day of dry time I am ready to spray some good ol' American OD. My choice for olive drab is Vallejo OD 43 and I vary the color by adding Vallejo Panzer Yellow, ochre, hemp, and interior green. The straight OD 43 gets sprayed on all the parts for both trucks. Once the base OD is dry, it is time to start mixing in the other colors, starting with panzer yellow. I go around the models and spray the same coverage as the base OD, bringing up the color slightly. I then add straight ochre to the mix and only hit the top sides of both trucks. I then thin the mix heavily and add some hemp.

Bear in mind that I am not adding any more base OD, just adding to the mix at hand. By keeping the spraying to only the top side of the trucks I am able to start a gradual modulation of the OD. The beauty of Vallejo is its transparency, as it shows the underlying colors well. The final touch is some Vallejo faded OD 41 mixed with just Hemp. During the painting process I use a heat gun to dry each layer of paint as I go. This helps me control where the color is going and I have no surprises.

All the subassemblies for both trucks are now done so I can loosely mock up both trucks for a final panel fading and streaking. When I spray the primer I also paint all the tires with flat black auto primer. I use a circle template to paint all the rims. I randomly hit the rims with the faded mix here just to keep it interesting. This completes my olive drab spraying session and it is time for some markings.

Starting with the Autocar I mask the front bumper ends for a quick shot of Tamiya white. This feature is reminiscent of transport trucks. I am now ready for the spraying of all the stars. Using a Lion Roar Allied Star stencils I add the air recognition stars to the hoods of both the trucks, and the smaller invasion stars to the doors and tailgate of the 969. Regular stars are sprayed to the doors of the 7144. Registration numbers for the Autocar are Archer

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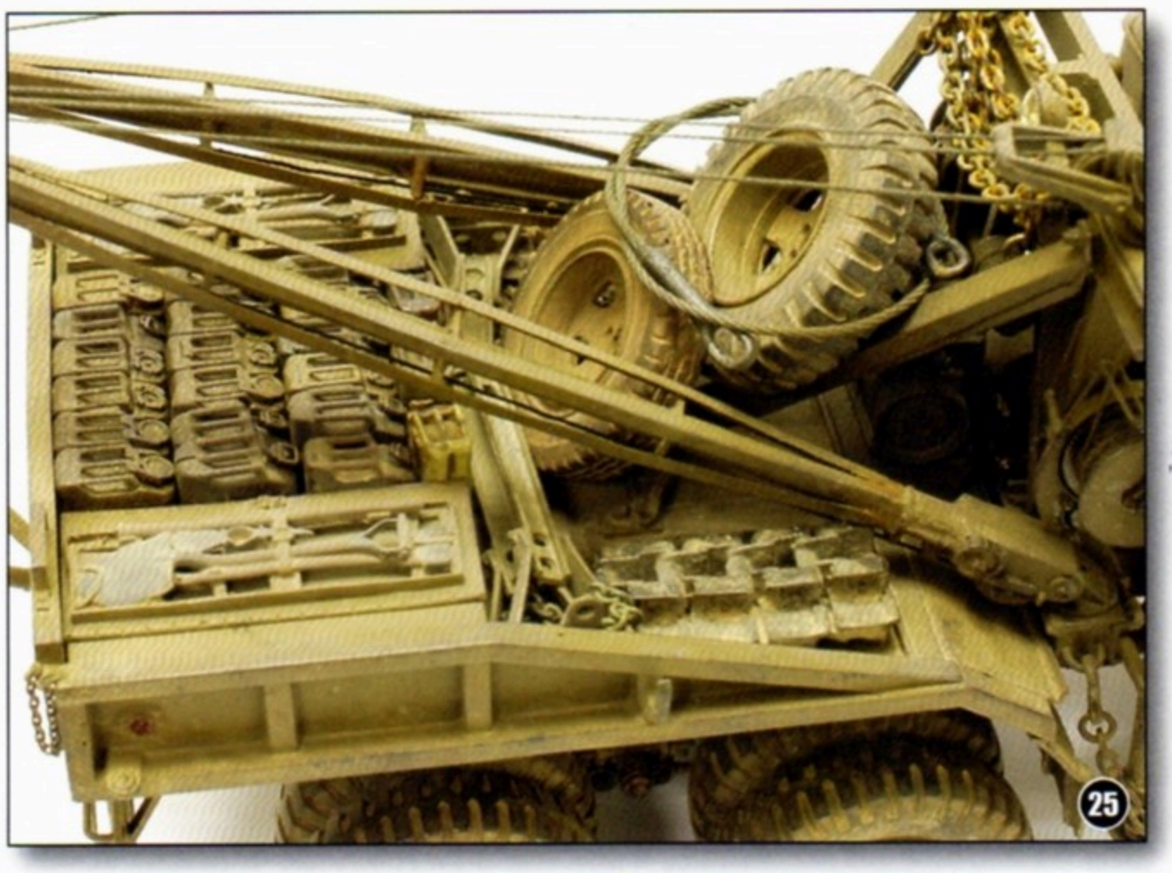

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23. *Hooking up my little buddy. The stabilizer bar kept the towed vehicle from wobbling too much. The wrecker's hooks are passed through eyes that are with the eyes on the stabilizer bar.* **24.** *Some AK Interactive engine oil is used on the wheel hubs and other mechanical bits that would be oily. The chalk marking means "did not finish."* **25, 26.** *The bed of the wrecker was filled with a mixture of Tasca and AA gas cans, Resicast D7 dozer track links, ModelKasten Sherman end connectors, and finally some spare M1A1 earth anchors. The chalked "x's" represent the number of tows the ol' gal has beneath her belt.*

27

dry transfers. Bumper codes for both trucks are from AA decals, the wrecker ones are kit supplied, whereas the Autocar markings are from the AA Diamond T cargo truck. Registration numbers for the 969 are also AA decals. The last thing I need to handle is the dash panels. Fingerprint Designs decals to the rescue! I brush paint Future on to help all the decals settle down and later after they are dry, I brush on some Vallejo flat varnish to kill the gloss from the Future. I don't clear the whole model for decals or weathering, only the areas where the decals will be applied. This completes the painting and markings for both trucks and it's time for final assembly.

Wrappin' the Red Ball

This is the final phase of the construction of both the trucks, and basically brings all the subassemblies together. I start by installing the Hercules

28. *Fingerprint Designs decals to the rescue! I brush paint Future on to help all the decals settle down and later after they are dry, I brush on some Vallejo flat varnish to kill the gloss from the Future.* **29**. *My choice for olive drab is Vallejo OD 43 and I vary the color by adding Vallejo Panzer Yellow, ochre, hemp, and interior green. I add all the stars to both of the trucks using a Lion Roar Allied Star stencil. Registration numbers for the Autocar are Archer dry transfers and bumper codes for both trucks are from AA decals.*

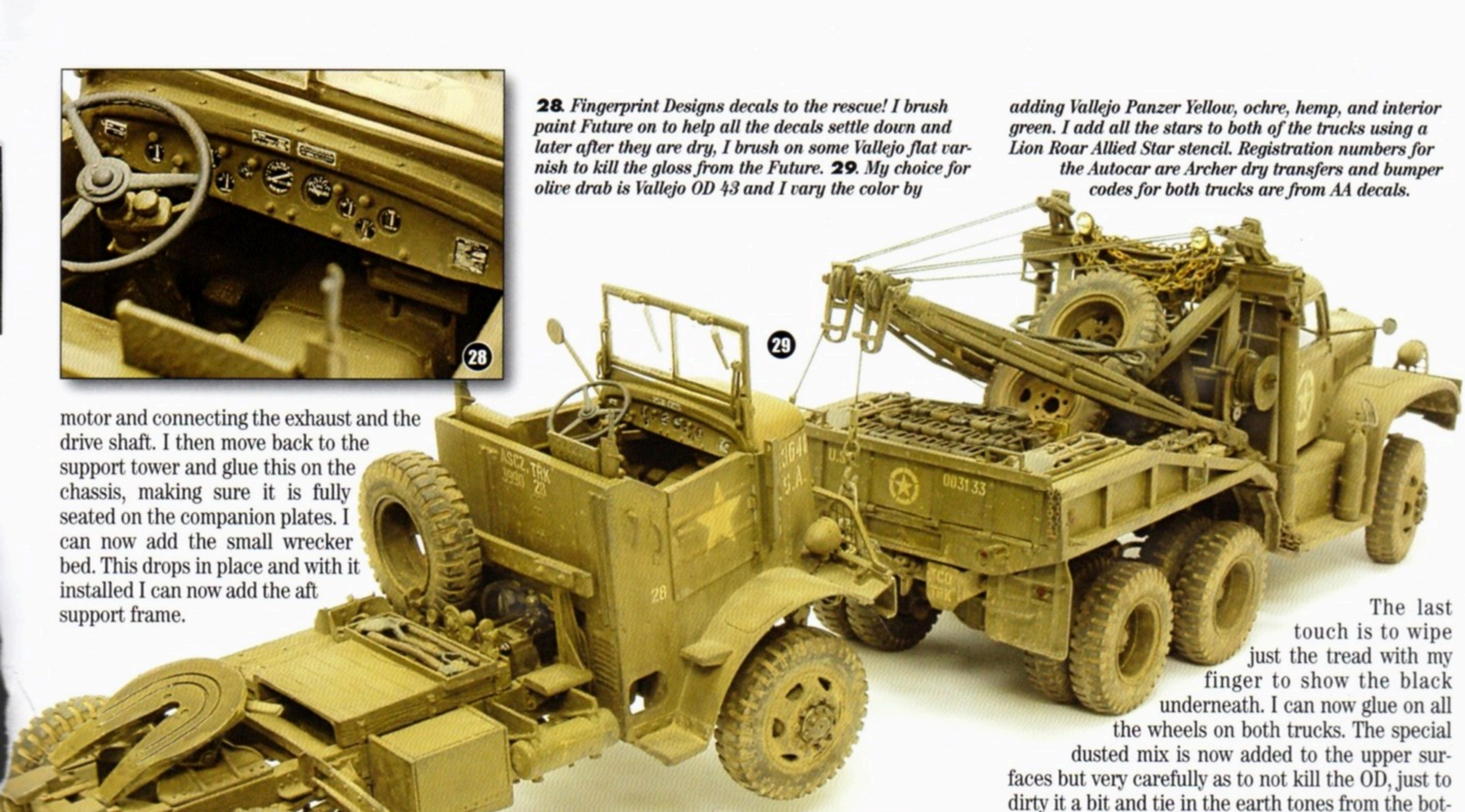
motor and connecting the exhaust and the drive shaft. I then move back to the support tower and glue this on the chassis, making sure it is fully seated on the companion plates. I can now add the small wrecker bed. This drops in place and with it installed I can now add the aft support frame.

The cab windows are carefully cut from the glazing and I lay the windows in place. With the aid of some Future, I brush paint around the edges of the windows. Essentially, I create a bead that I build up to secure the windows in place. I can now add the finished dash and steering column with the steering wheel.

I glue on the cab doors making sure the trim line is straight with the cab and I can now drop the cab roof on. The joint of the roof is right on the money, without the need for any filler. The one area to take care with is where the front windshield frame attaches to the upper firewall. It is so close that I have to use very little superglue or run the risk of fogging the glazing. With the cab done I can drop it in place for the last time.

Before I put the twin booms on I have to rig the lifting reeving, so I drill a small pilot hole on the underside of the ratchet spool and feed some string around the spool a couple of times and fix it in place with a drop of superglue. I make sure the string is long enough to go back and forth from the boom end to the support tower and two equal lengths are cut for both booms. Since I have pinned the bottom of each boom pivot I simply drop these into their pilot hole on the support base.

Swinging each boom, I glue them into their travel/rear lifting lock position. I am now able to rig the booms into the height I want and tie the other end of the string to the boom-lifting flange. The final riggings are the two lifting cables. These are fitted with the resin eyelets and hooks and the string is run the guides and pulleys. I leave both of these a little oversize because I am not sure where they will need to be set for the lift of the 7144. The string is fed through the top of the tower down to each cable drum and will be glued later.



Sponge, oils, pigs, and some love

I start the weathering process with a sponging of Lifecolor brown and panzergrau on all the edges of the working areas of both the 969 and 7144. I mix this with water and vary the color from light to dark. Happy with the worn edges it is time to start the washes and modulation for the OD. I make a mix of raw umber; Vandyke brown and Paynes gray mixed with odorless thinner and hit all the undersides of both chassis and running gear. I also use this very sparingly on the upper surfaces and bolt details. With a separate mix of olive green, Paynes gray, and green earth hue I start modulating the upper surfaces of the wrecker and the cab of the Autocar. I move around and blend and move and blend and move, kind of like night at the Discotheque.

Now my OD is pure popping bliss (in my eyes) and it is time to start working with unbleached titanium. This color is incorporated to both of my previous oil mixes, one for the tires (dark base) and one (green) for the bleaching out of the bodywork. With the tire oil mix I also add my special mix of pigments for WW2 ETO, and start to build the layers of mud similarly going light to dark and back to light. This mimics layers of dirt and mud dried over time on the tires.

I liberally wash the bottom of both trucks with this dirty mix. I then place both trucks on their sides with all the tires laid out in front and I start my mud slinging. I flick the brush end towards the wheel wells and chassis in a random fashion doing the same light to dark method multiple times. When this is all dry it looks perfectly filthy.

The last touch is to wipe just the tread with my finger to show the black underneath. I can now glue on all the wheels on both trucks. The special dusted mix is now added to the upper surfaces but very carefully as to not kill the OD, just to dirty it a bit and tie in the earth tones from the bottom of the trucks. The last detail was to go around with some AK Interactive engine oil and hit wheel hubs and other mechanical bits that would be oily.

The bed of the wrecker was filled with a mixture of Tasca and AA gas cans, Resicast D7 dozer track links, ModelKasten Sherman end connectors, and finally some spare M1A1 earth anchors. I add a red spotlight to the front of the 969 as per my reference picture of a Red Ball Road Patrol 969.

Having the right reference for a model like this is easy. In this case, Ampersand Publishing has two to choose from. Having the inspiration and determination to finish is a little harder. I knew I wanted to do something showing this little workhorse in its element, but I hadn't found a picture in all my searching that just grabbed me. I wanted to depict the Diamond T towing back an Autocar to a workshop for repairs, but most importantly a Red Ball Express wrecker and tractor. I needed a confirming shot that this had been done.

So I made the call to the Main Man at Ampersand and told him of my conundrum and magically he opened up his treasure trove and provided me with the picture I needed. That one picture is all I needed to put the pedal to the wrecker metal.

The Accurate Armour kit is truly a gift from the wrecker gods and having it finished and looking killer is all a truckey guy like me could ever ask for… Well, maybe a C-2, or an M1 Model 1000 Series 4, or a Kenworth 572... Ah, to dream!

—Anthony "Superdope" Guarderas

MMiR RECCE

Accurate Armour Diamond-T 969 Wrecker (Hard Cab). Kit number K128H. Suggested retail price £150.00, or around $237.00 at press time.

References

Heavy Wrecker, A Visual History of the U.S. Army's Wheeled and Tracked Wreckers 1940-1945, by David Doyle. Ampersand Publishing Co., 2008. ISBN: 978-0-9773781-5-9. If you're into wreckers and you don't have this book, then something is wrong with you. Covers all the wheeled wreckers, baby! Inspiration city! My only complaint: could have been twice as long.

Allied-Axis, The Photo Journal of the Second World War, Issue 8, Ampersand Publishing Co., 2008. 4-ton "Diamond-T" 969A Wrecker by Carlos D'Arcy. Different combat stuff than the above title, but the same walk around photos of the beastie.

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